Homestead Valley Sanitary District

Sewer System Management Plan

Adopted by the HOMESTEAD VALLEY Board of Directors on 08/22/06

EXECUTIVE SUMMARY:

This Sewer System Management Plan (SSMP) has been prepared in compliance with requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to Section 13267 of the California Water Code, and the State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ, , and Amended Monitoring and Reporting Program (MRP), Order No. WQ 2013-0058-EXEC.

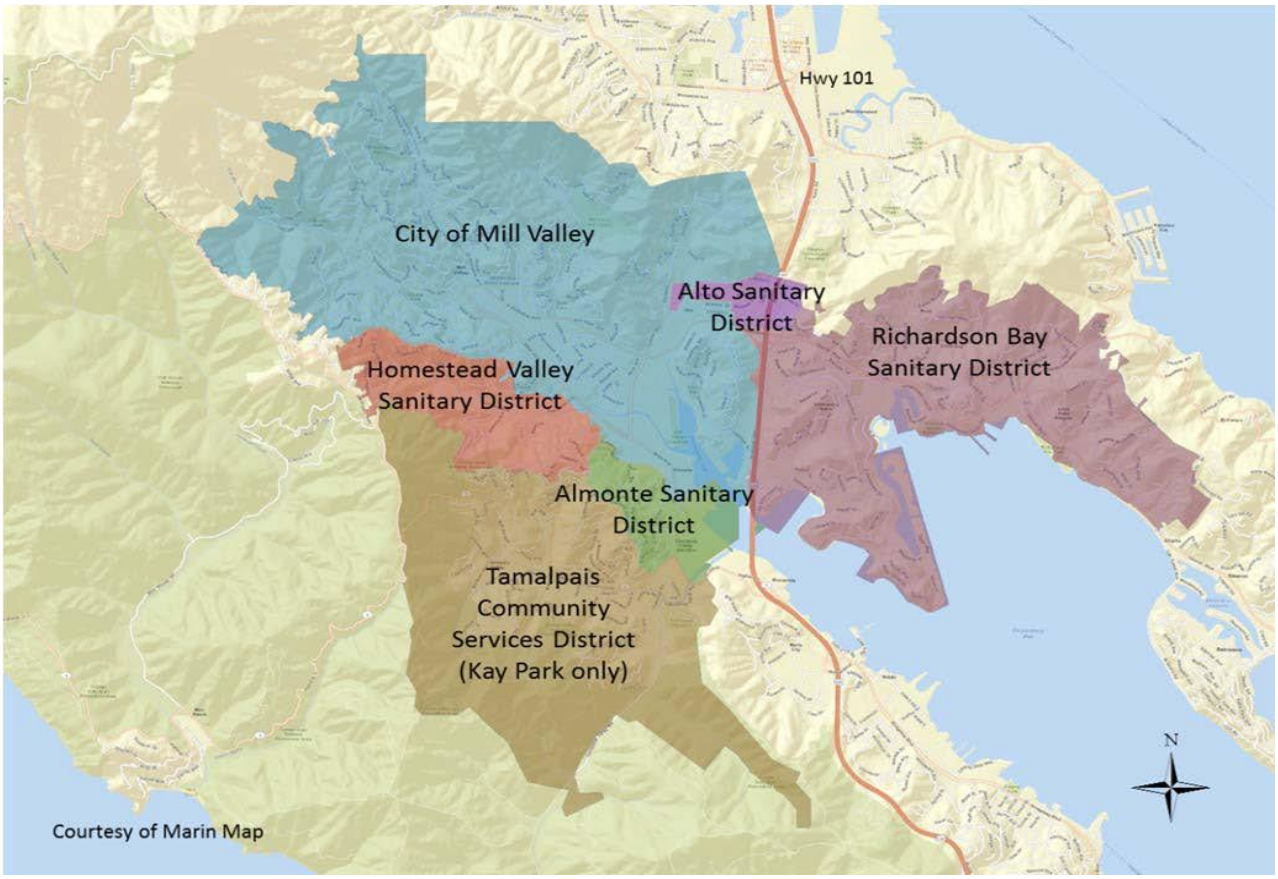
BACKGROUND:

On July 7, 2005, the RWQCB issued a letter to the San Francisco Bay Region (Region 2) sewer collection system agencies that required the agencies to prepare an SSMP. At the same time, the RWQCB released an SSMP Development Guide that was prepared in cooperation with the Bay Area Clean Water Agencies (BACWA). The 2005 directive stated that Homestead Valley must also comply with RWQCB sanitary sewer overflow (SSO) electronic reporting requirements issued in November 2004.

Similarly, on May 2, 2006, the State Water Resources Control Board (SWRCB) issued a directive through Order No. 2006-0003-DWQ to require all public wastewater collection system agencies in California with greater than one mile of sewers to be regulated under General Waste Discharge Requirements (Statewide WDR). Portions of this Order related to monitoring and reporting were amended by Order No. 2013-0058-EXEC, dated July 30, 2013. The SWRCB SSMP requirements are similar to those of the RWQCB but differ in organization and some details.

The intent of this SSMP is to meet the requirements of both the RWQCB and the Statewide WDR. The organization of this document follows the requirements of the Statewide WDR. The District's waste discharger identification number (WDID) in the California Integrated Water Quality System (CIWQS) is 2SSO10143.

Homestead Valley Sanitary District (Homestead Valley or District) provides wastewater collection service to the unincorporated area of southern Marin bordered by the City of Mill Valley, Almonte Sanitary District and Tamalpais Community Services District. The District serves approximately 2500 residents, a small number of businesses and has been servicing the area since 1948. District flows are conveyed to the Sewerage Agency of Southern Marin (SASM) wastewater treatment plant in Mill Valley. SASM was formed under the Exercise of Joint Powers Act, and also includes Almonte, Alto, and Richardson Bay Sanitary Districts, and a portion of Tamalpais Community Services District, and the City of Mill Valley. Figure ES-1 shows the District's service area and its relationship to SASM and the other SASM member agencies.



HOMESTEAD VALLEY SERVICE AREA WITHIN SASM SERVICE BOUNDARIES

SSMP OBJECTIVES:

The objectives of the SSMP are to accomplish the following:

Establish goals that align the Homestead Valley sewer collection system operation, management and
capacity assurance activities in a manner that achieves the goals stated in Element 1.

Comply with the RWQCB SSMP Develop Guidelines and Statewide WDR through provision of the following:

- Elements I through XI, following the outline of the Statewide WDR, including a description of the regulatory requirements and a summary of existing and planned documents and plans related to each element, and
- Appendices that are amended over time to reflect changes in contact personnel, job descriptions, policies, procedures and programs.

Table ES-1 identifies the objectives that must be addressed to comply with each SSMP element.

Table ES-1, SSMP Objectives

ELEMENT	OBJECTIVE
1. Goals	• Properly manage, operate, and maintain the collection system • Provide capacity to convey base and peak flows • Minimize the frequency and severity of SSOs • Mitigate the impact of SSOs
2. Organization	• Identify agency staff responsible for the SSMP • Identify chain of communication for responding to and reporting SSOs
3. Legal Authority	• Control I/I from the collection system and laterals • Require proper design and construction of sewers and connections • Require proper sewer installation, testing and inspection • Have the authority to impose source control requirements
4. Operation and Maintenance Program	• Maintain up-to-date maps • Allocate adequate resources for system operation and maintenance • Prioritize preventative maintenance activities • Identify critical equipment and spare parts to minimize equipment and/or facility downtime • Provide staff training on a regular basis
5. Design & Construction Standards	• Identify minimum design and construction standards and specifications • Identify procedures and standards for inspecting and testing
6. Sanitary Sewer Overflow Emergency Response Program (SSOERP or SSORP)	• Provide SSA notification procedures • Develop and implement a plan to respond to SSOs • Develop procedures to report and notify SSOs • Develop procedures to prevent overflows from reaching surface waters and to minimize or correct any adverse impacts from SSOs
7. FOG Control Program	• Develop a Fats, Oil and Grease (FOG) control plan, if needed
8. System Evaluation and Capacity Assurance	• Establish a process to access current and future capacity requirements • Implement a capital improvement plan to provide hydraulic capacity
9. Monitoring, Measurement, and Program Modifications	• Measure the effectiveness of each SSMP element • Monitor each SSMP element and make updates as necessary
10. SSMP Audits	• Conduct a bi-annual audit that includes deficiencies and identify steps to correct them
11. Communication Program	• Communicate with the public on SSMP development, implementation and performance. Create a plan for communication with tributary/satellite sewer systems if applicable

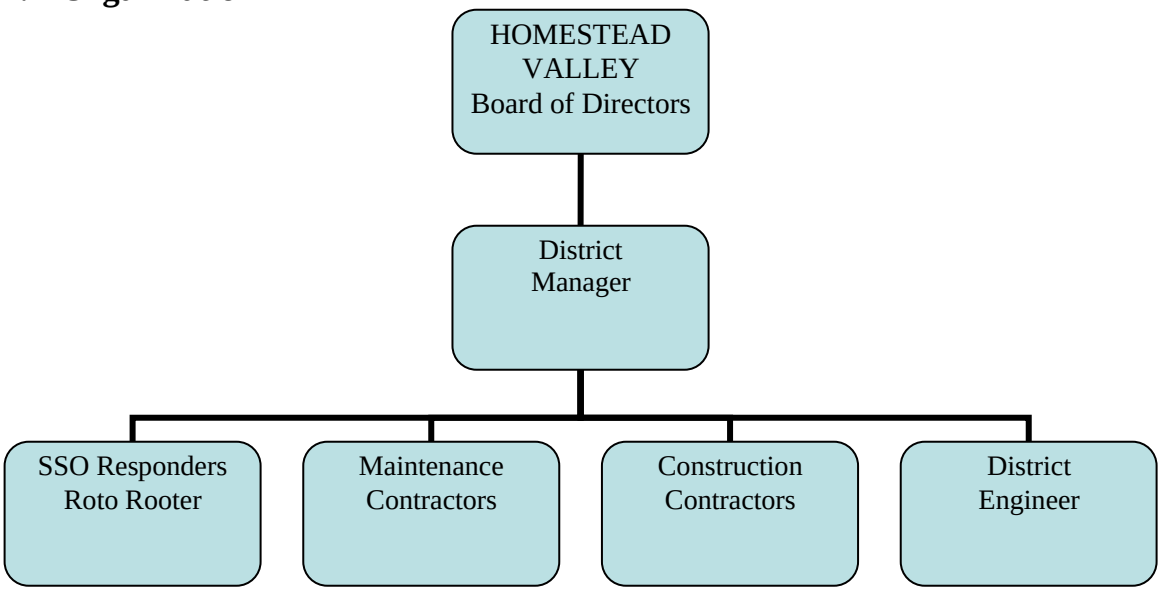
1. Goals

The goals of the District are to accomplish the following:

- To properly manage, operate, and maintain all parts of the wastewater collection system, so as to preserve and protect the public's investment in that system
- To provide adequate capacity to convey peak flows to the WWTP

- To minimize the frequency and duration of SSOs, including implementing regular, proactive maintenance of the system to remove issues that may cause sewer backups or SSOs
- To mitigate the impact of SSOs on public health and the environment
- To respond quickly and respectfully to public notifications of SSOs or other collection system issues
- To collect complete and accurate information regarding SSOs for reporting to the appropriate regulatory agencies
- To uphold the District's standards and specifications on newly constructed public and private sewers
- To provide a safe working environment for District employees
- To provide District employees with the tools and training needed to perform their work effectively and achieve the District goals

2. Organization



HOMESTEAD VALLEY Board of Directors: Adopts SSMP plan and policy. Approves budget to implement SSMP.

District Manager: Overall responsibility for preparing and implementing the SSMP. Directs SSO response personnel. Monitors SSMP budget and performance. Directs contractor activities in making capital improvements. Directs contractor activities in cleaning and television inspection of the sewer system. Manages sewer overflow response. Prepares and

submits reports. Writes annual work plan for maintaining, inspecting and improving the sewer system. Regulatory Agency liaison.

SSO Responders (Roto Rooter, District Manager, other contractors): Performs SSO response activities.

Maintenance Contractors (Roto Rooter). Performs SSO response activities. Conduct sewer cleaning and televising activities.

Construction Contractors: Construct sewer system improvements.

SSMP Responsibilities

ELEMENT	OBJECTIVE
1. Goals	• The District Manager leads staff in the implementation of the District's goals.
2. Organization	• The District Manager updates the organizational structure, manages SSMP implementation assignments, and amends SSO response and reporting chains of communication, as needed.
3. Legal Authority	• The District Counsel upholds the District Ordinance and drafts new ordinances as needed.
4. Operation and Maintenance Program	• The District Manager manages the District's resources and budget, and completes outreach to plumbers and building contractors. • The District Manager manages preventive maintenance, contingency equipment and replacement inventories, training, collection system map, project inspections, and condition assessments.
5. Design & Construction Standards	• The District Engineer reviews design and construction documents to ensure that all construction projects meet the District's standards. The District Engineer also updates standards for installation, rehabilitation and repair, as needed. The District Manager provides inspection services to ensure the District's construction standards have been followed.
6. Sanitary Sewer Overflow Emergency Response Program (SSOERP or SSORP)	• The District Manager oversees implementation of the Overflow Emergency Response Plan by the Maintenance Contractor, makes revisions to the plan, and conducts/attends regular training.
7. FOG Control Program	• The District Manager develop a Fats, Oil and Grease (FOG) control plan, if needed. The Maintenance Contractor identifies District sewers where grease may be a problem.
8. System Evaluation and Capacity Assurance	• The District Manager establishes and assesses capacity requirements for the collection system and manages implementation of the Capacity Assurance section of the Sewer System Response Action Plan. The District Manager also updates CIP budgets and schedules for projects to address capacity needs.
9. Monitoring, Measurement, and Program Modifications	• The District Manager monitors implementation and assess success of the SSMP program elements, including identifying trends in SSOs, and reporting progress to the District Board.
10. SSMP Audits	• The District Manager conducts a bi-annual audit that includes deficiencies and identifies steps to correct them
11. Communication	• The District Manager and Board of Directors communicate with the public and

Program	nearby agencies on the SSMP.

Names and telephone numbers for all responsible HOMESTEAD VALLEY personnel are shown on exhibit 'A'.

In accordance with the attached "Sanitary Sewer Emergency Overflow Response Program (SSEROP)" (Exhibit 'A'), all SSO's are immediately reported to the District Manager. It is the District Manager's responsibility to report all SSOs to the Marin County Department of Health Services, the Regional Water Quality Control Board, the State Water Resources Control Board, the State Office of Emergency Services, and the California Department of Fish and Game (if applicable).

Office of Emergency Services: (800) 852-7550

District Manager: (415) 388-4796

Contract Responder – Roto Rooter: (415) 388-2740 or (415) 898-6074

Agencies:

- California Regional Water Quality Control Board: (510) 622-2369
- California Department of Fish and Game: (707) 944-5500
- County Environmental Health Services: (650) 473-6907
- California Office of Emergency Services: (800) 852-7550
- U.S. Coast Guard : (415) 399-3530

3. Legal Authority:

Legal Authority for the management of HOMESTEAD VALLEY's collection systems is provided by the District's Ordinance No. 15 (Adopted May 28, 1974) and Ordinance No. 2014-01 (adopted September 23, 2014) in conjunction with the Sewerage Agency of Southern Marin (SASM) Ordinance No. 83-1 which pertains to the collection systems of SASM's member agencies, including HOMESTEAD VALLEY. (see Appendix B)

a. Authority to control inflow and infiltration

HOMESTEAD VALLEY SEWER ORDINANCE NO. 15 provides authority for the District to regulate the proper construction and use of private and public sewer within the District. The ordinance prohibits the connection of surface drains for storm or ground water to District sewers. Also, no surface or storm water, seepage or unpolluted water from any source shall be permitted to enter into a sanitary sewer by any means.

HOMESTEAD VALLEY SEWER ORDINANCE NO. 2014-01 provides additional authority to regulate the inspection, maintenance and construction of private laterals within the District. Ordinance 2014-01 gives the District additional authority to require inspection and

rehabilitation of sewer laterals when homes are sold, undergo major upgrades, are subject to blockage and overflow or the District believes that condition issues exist or that the lateral presents a threat to public health and safety.

SASM Ordinance No. 83-1 was adopted by the SASM Board of Directors on April 21, 1983. Section 2.01 (k) of this ordinance states that "No individual, company, or government agency shall discharge sewage to a sewer owned and operated by an Agency tributary to a treatment works operated by SASM which causes SASM's interceptor sewers and sewage collection systems to be overloaded". This provision grants SASM legal authority to control excessive infiltration and inflow into the SASM sewer system. Ordinance 83-1 also prohibits the discharge of any stormwater, groundwater and/or unpolluted water into the SASM sewer system.

b. Authority to prohibit the discharge of fats, oils and grease and other debris that might cause blockages

HOMESTEAD VALLEY Ordinance No. 15 limits the introduction of fats, oils and grease as well as debris that might cause blockages.

Section 2.01 (b) of SASM Ordinance No. 83-1 states that "No individual, company, or government agency shall discharge sewage to a sewer owned and operated by an Agency tributary to a treatment works operated by SASM which causes an obstruction to the treatment works (which by definition includes the sanitary sewer collection system)." In addition, Section 2.08.2 of Ordinance No. 83-1 states that "No person shall discharge any wastewater containing more than 300 mg/l of oil or grease of animal or vegetable origin or containing more than 100 mg/l of oil or grease of mineral or petroleum origin.

c. Authority to require proper design and construction of new and rehabilitated sewers and connections

HOMESTEAD VALLEY Ordinance No. 15 requires compliance with District regulations and the requirement to obtain a permit to construct sewers within the District.

d. Authority to require proper installation, testing, and inspection of new and rehabilitated sewers

Homestead Valley Ordinance No. 15 requires inspection and approval by the District engineer of all sewers and that workmanship and materials shall be in accordance with the applicable sections of the Uniform Plumbing Code and the District's standards for sewer construction.

e. Authority to enforce

Ordinance No. 15 provides for enforcement for any violation of the Ordinance.

f. Authority to access HOMESTEAD VALLEY sewers for maintenance, inspection, and repairs

All HOMESTEAD VALLEY sewers are in public right-of-ways or in HOMESTEAD VALLEY easements that allow HOMESTEAD VALLEY access for maintenance, inspection, and repair.

4. Operations and Maintenance

a. Collection system map

HOMESTEAD VALLEY maintains a computerized map and database inventory of its wastewater collection system. The map shows all gravity line segments and maintenance holes. The District does not own pumping facilities or pressure pipes.

b. Resources and budget

HOMESTEAD VALLEY allocates adequate resources for the operation, maintenance, and repair of its collection system.

HOMESTEAD VALLEY's operating and capital revenues are derived from a user-supported rate-paying structure.

c. Prioritized preventive maintenance

HOMESTEAD VALLEY has an aggressive preventative maintenance program. The District is currently cleans approximately one third of its sewers annually. The District has also established a program to provide increased preventive maintenance to troublesome sewer sections on a more frequent basis. The District has adopted the SSGIS computer based computerization of the preventive maintenance and cleaning programs.

d. Scheduled inspections and condition assessment

HOMESTEAD VALLEY is discussing establishing a televising and condition assessment program for its sewers. Because of the frequency of the cleaning program, problems identified in the course of normal maintenance are dealt with on an as-needed basis through spot repairs or larger replacement projects.

e. Contingency equipment and replacement inventories

HOMESTEAD VALLEY currently conducts all sewer system maintenance, cleaning, inspection, repair and replacement using contract services provided by Roto Rooter. HOMESTEAD VALLEY therefore does not maintain an inventory of contingency equipment or replacement parts.

f. Training

HOMESTEAD VALLEY has a limited staff consisting of one part-time manager, who has extensive experience in wastewater treatment and collection system operation. Staff is responsible for inspection of collection system repairs in conjunction with the District Engineer. HOMESTEAD VALLEY currently conducts all sewer system maintenance, cleaning, repair and replacement using contract services. HOMESTEAD VALLEY staff is responsible for ensuring that contractors comply with Cal OSHA requirements.

HOMESTEAD VALLEY staff is also responsible for emergency response to Sewer System Overflows. In accordance with HOMESTEAD VALLEY's "Sanitary Sewer Emergency Overflow Response Program", SSO response training is required and conducted annually.

g. Outreach to plumbers and building contractors

HOMESTEAD VALLEY is prepared to participate in a region-wide outreach program.

5. Design and Construction Standards

On an as-needed basis, HOMESTEAD VALLEY uses the services of registered engineers when installation, rehabilitation, and/or repairs of the HOMESTEAD VALLEY collection system are required. The following plans apply to sanitary sewer collection systems and not to pump stations.

a. Standards for installation, rehabilitation and repair

HOMESTEAD VALLEY utilizes standards for installation, rehabilitation and repair of District sewers as provided for in the District's based on the design and construction standards provided by the District engineer. (see Appendix C)

b. Standards for inspection and testing of new and rehabilitated facilities

HOMESTEAD VALLEY utilizes procedures as outlined in the District's design and construction standards.

6. Overflow Emergency Response Plan (SSOERP or SSORP)

HOMESTEAD VALLEY's "Sanitary Sewer Overflow Emergency Response Program" is attached as Exhibit 'A'.

7. Fats, Oils, and Grease (FOG) Control Program

HOMESTEAD VALLEY has evaluated its wastewater collection system and determined that the current program for managing fats, oils and grease is sufficient.

HOMESTEAD VALLEY Ordinance No. 15 in conjunction with the Sewerage Agency of Southern Marin (SASM) Ordinance No. 83-1 provides authority to limit the quantity of grease that may be introduced into the drainage or sewerage system in quantities that can effect line stoppage or hinder sewage treatment or private sewage disposal. A grease trap is not required for individual dwelling units or for any private living quarters.

HOMESTEAD VALLEY will require the installation and maintenance of a grease trap on restaurants that connects directly to the District's sewer system, if necessary. However, at this time, the District does not have commercial restaurants connected to its sewer system.

8. Capacity management

a. Capacity assessment

HOMESTEAD VALLEY has established a process to assess the current and future capacity requirements for the collection system facilities. The HOMESTEAD VALLEY collection system is designed to handle extreme wet weather flows due to rainwater infiltration into the sewer system. Dry weather capacity is therefore much more than adequate under all circumstances. Homestead Valley is participating with SASM in system wide flow monitoring and modeling . Also, wet weather capacity limitations have been identified through simple

observation of collection system conditions when extreme, prolonged wet weather conditions prevail.

Growth is not an issue in the HOMESTEAD VALLEY service area. The District has very few remaining building sites left, much less than 1% of current capacity.

b. System evaluation and capacity assurance plan

A capital improvement plan has been prepared and implemented as discussed in section 8.a. above to provide hydraulic capacity of all sewer system elements under peak flow conditions.

9. Monitoring, measurement, and program modifications

Any SSO that occurs at any time will trigger an investigation by the District Manager. The cause of the SSO will be determined and the SSMP will be modified by the District Manager to minimize the likelihood that an SSO does not reoccur in the same location for the same reason.

All SSO's will be reported to the HOMESTEAD VALLEY Board of Directors; to the San Francisco Regional Water Quality Control Board via CIWQS in accordance with reporting standards adopted by the Regional Board in November, 2004; and to the State Board pursuant to WDR . The annual report format is designed to identify and illustrate trends including frequency, location and volume.

10. SSMP Audits

The District Manager is responsible for monitoring the effective and complete implementation of the SSMP. The District Manager will prepare and file a written point by point compliance review of the SSMP bi-annually. Any deficiencies in implementation will be corrected. This audit will focus on evaluating the effectiveness of the SSMP and compliance with State and regional SSMP requirements.

11. Communication Program

The completed SSMP and modifications thereto are and will be presented in public session to the HOMESTEAD VALLEY Board of Directors for discussion, modification, and adoption. In addition, all SSOs are and will be reported to the HOMESTEAD VALLEY Board of Directors in public session.

Homestead Valley Sanitary District

Sanitary Sewer Overflow Response Plan

Appendix A

Revised: August 2009,
May 2014

Original: October 2008

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List of Figures

Appendices

List of Abbreviations

CCTV	Closed-Circuit Television
CDFG	California Department of Fish and Game
CIWQS	California Integrated Water Quality System
District	Homestead Valley Sanitary District
EHS	County of Marin Environmental Health Services
EPA	Environmental Protection Agency
Field Report	Sanitary Sewer Overflow Service Call & Field Report Form
GWDR	General Waste Discharge Requirement
LRO	Legally Responsible Officer
MMS	Maintenance Management System
MRP	Monitoring and Reporting Form
O&M	Operations and Maintenance
RWQCB	Regional Water Quality Control Board
SOP	Standard Operating Procedure
SSO	Sanitary Sewer Overflow
SSORP	Sanitary Sewer Overflow Response Plan
SWRCB	State Water Resources Control Board

Chapter 1 Introduction

The purpose of the Sanitary Sewer Overflow Response Plan (SSORP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The SSORP provides guidelines for responding to, cleaning up, and reporting SSOs that may occur within the collection system service area.

1.1 Regulatory Requirements

The section summarizes the regulatory requirements for the SSORP.

1.1.1 EPA Administrative Order Requirements

This Sanitary Sewer Overflow Response Plan addresses the requirements of Section II of the EPA Amended Order for Compliance, Docket No. CWA-309(a)-08-030, dated September 2, 2008 which includes the following requirements:

II. Sanitary Sewer Overflow Response Plan

A. By October 15th, 2008, an SSORP shall be submitted to EPA. An SSORP shall describe emergency response and contingency procedures to address SSOs from its collection system, including measures for containing and recovering spilled sewage, establishment of interim system operations, and timely repair and restoration of normal operations. Each agency shall ensure that agency staff and responders are adequately trained to perform the procedure outlined in the SSO response plan. The plan shall include:

i. Procedures to notify the responders during normal business hours and after business hours. A responder should be at the SSO spill location and initiating response activities within 60 minutes after the agency becomes aware of the spill. If the responder cannot be at the spill location within 60 minutes, the agency shall report the late response as part of the quarterly spill report required. The agency will include in the quarterly spill report a description of all late responses, reasons for each late response, and steps that will be taken to improve the response time.

ii. Procedures to ensure containment, termination, maximum recovery, and cleanup of spilled sewage. These procedures shall prevent spills from reaching storm drains and surface water, and mitigate the impact of spills that reach storm drains and surface water.

iii. Procedure to estimate volume. The procedures should include more than one estimation method that can be used for different spill scenarios.

iv. Procedures to secure the area surrounding a spill and post warning signs as necessary in coordination with the County of Marin's Department of Health and Human Services;

v. Procedures to sample and monitor surface waters following spills.

vi. A list of necessary spare parts and emergency equipment to ensure adequate response time and maximum recovery of spilled sewage.

vii. A description of staffing needs required to respond to SSOs and whether staffing duties will be carried out by agency staff, staff from other agencies, or private contractor(s). To the extent that any SSO response duties will be carried out by private contractor(s), the plan shall describe the contractor and include copies of the contracts obligating the contractor(s) to fulfill the requirements of the SSO response plan implemented pursuant to this Order.

B. Recordkeeping: The response plan developed shall include procedures for agency staff or its contractors to maintain records of spill incidents, including field reports that provide adequate information to meet reporting requirements to regulatory agencies, and procedures to link these records to the Maintenance Management System.

C. Notification: The response plan developed shall include procedures for notifying the public, including schools and recreational clubs, which may be affected by the spill. The plan should include procedures for advising the public to avoid contact and to take steps, as appropriate, in cases of contact with spilled sewage. For spills in homes and businesses, the plan should include procedures for cleaning the spill area. The plan shall identify the agency staff person(s) responsible for public notification.

D. Reporting: The response plan shall include procedures for reporting spills, as required, to the appropriate regulatory agencies, including the Regional Board, State Water Resources Control Board, the State of California's Office of Emergency Services, and the County of Marin's Department of Health and Human Services. The plan shall identify the agency staff person(s) responsible for reporting sewage spills.

1.1.2 GWDR Requirements

The Statewide General Waste Discharge Requirements (GWDR) for Sanitary Sewer System was adopted by the State Water Resources Control Board of California (SWRCB) on May 2, 2006. The goal of the GWDR is to provide a consistent statewide approach for reducing SSOs. The GWDR outlines requirements for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. Per the GWDR, the collection system agency shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

(a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;

(b) A program to ensure appropriate response to all overflows;

(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System permit requirements. The Sewer System Management Plan should identify the officials who will receive immediate notification;

(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;

(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and

(f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

1.2 Goals

The purpose of this SSORP is to provide Homestead Valley Sanitary District (District) personnel with established guidelines for responding to sewer spills which may occur within the collection system service area. The goals with respect to responding to SSOs are:

- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO; and
- Meet the regulatory reporting requirements.

1.3 Definitions

Minor Sanitary Sewer Overflow (SSO): Category 3 SSO.

Major Sanitary Sewer Overflow (SSO): Category 1 SSO and Catagory 2 SSO

Sanitary Sewer System: Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility.

Sanitary Sewer Overflow (SSO): An SSO includes any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundment, tanks, etc) are considered to be part of the sanitary sewer system, and discharges to these temporary storage facilities are not considered to be SSOs.

The responsibilities of the SSO response team depend on the volume, location, and impact of an incident. Three categories of SSOs are defined by the SWRCB.

Category 1 SSO

Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a municipal separate storm sewer system and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the municipal separate storm sewer system is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or ground water infiltration basin (e.g., infiltration pit, percolation pond).

Category 2 SSO

Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a municipal separate storm sewer system unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.

Category 3 SSO

All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

- **Private Lateral Sewage Discharges:** Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

1.4 SSORP Review and Updates

To coordinate with the requirements of the state's GWDR process, the District SSORP will be reviewed at least once every two years and updated if necessary.

Chapter 2 Response to Notification of Spill

The Homestead Valley Sanitary District has adopted service call / overflow response procedures requiring immediate response to minimize or eliminate an overflow. The District contracts with an emergency response contractor that provides all necessary spill response supplies. These supplies are available for use at any time. The Overflow Response Standard Operational Procedure (SOP), included as Appendix 1, is to aid staff in prompt and responsible SSO response.

When a notification of an SSO is received, it should be clearly communicated who will respond, the estimated time of arrival, and what areas will need to be accessed. The information provided by the caller should be verified before dispatching a field crew. This includes verifying the address and nearest cross street and making sure it is part of the District's conveyance system. If not, provide the caller with the phone number of the responsible agency and follow up by calling the agency and providing the details of the call. Contact information for neighboring agencies is included in Appendix 2.

2.1 Public Observation of SSO

Public observation is the most common way that the District is notified of blockages and spills. Contact information for reporting sewer spills and backups are in the phone book and on the website: www.Homestead Valleysd.org. The main telephone number is (415) 388-4796.

Homestead Valley does not maintain regular working hours. When District staff receives a call reporting a sewer spill or backup, the staff member takes the information from the caller and fills out the first section of the Sanitary Sewer Overflow Service Call & Field Report Form (Field Report) found in Appendix 4. The person who took the call verbally communicates (do not leave a voicemail) appropriate information to the District Manager, or appropriate District personnel, along with any information collected on the Field Report. The District Manager, or appropriate District personnel, then notifies the emergency response contractor (Roto-Rooter), which responds to the incident and then files a report to the District as soon as possible.

If District staff does not take the call, the District's voicemail instructs the caller how to be directly connected to Roto-Rooter, which responds to the incident and then files a report to the District as soon as possible.

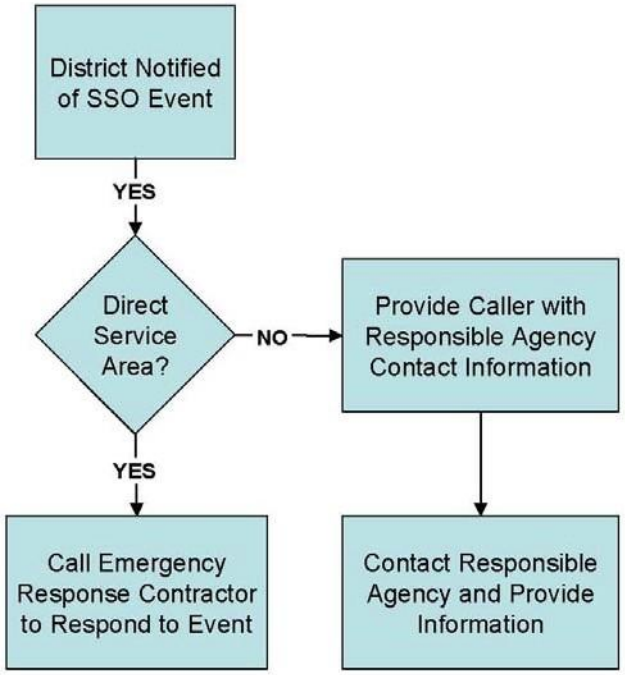
2.2 Staff Observation

District contractors perform periodic work on its sewer system facilities. Any problems noted with the sewer system facilities are reported to the District Manager who, in turn, respond to emergency situations.

2.3 Response Flow Chart

Sewer service calls are considered high priority events that demand a prompt response. The notification and response procedure flow chart is shown on **Figure 2-1**.

Figure 2-1: Notification and Response Flow Chart



2.4 Roles for Responding to SSOs

Currently, the following positions are responsible for responding to SSOs:

- First Responder to SSO: Emergency Response Contractor (Roto-Rooter)
- Claims Processing: District Manager

The contact information for those currently holding the positions named above are shown in Appendix 3.

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION	Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, the District will notify the California Office of Emergency Services (OES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550** County Health Officer **(415) 473-3707** and Marin County Environmental Health Services (EHS) **(415) 473-6907** are also to be contacted. During evenings/weekends, call the Sheriff Communication Center at **(415) 479-2311.**
REPORTING	• Category 1 SSO: the District will submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. • Category 2 SSO: the District will submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: the District will submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: the District will submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: the District will certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.Collection System Questionnaire: the District will update and certify every 12 months	• Enter data into the CIWQS Online SSO Database (http://ciwqs.waterboards.ca.g ov/), certified by the Legally Responsible Official(s). • All information required by CIWQS will be captured in the Sanitary Sewer Overflow Report. • Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the State SSO Program Manager must be contacted to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days.
WATER QUALITY MONITORING	• The District will conduct water quality sampling within 48 hours after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters. EHS requires daily water quality sampling until compliance is achieved, if there is a Category I discharge of 1,000 gallons or greater and spills into surface water.	Water quality results will be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING	The District will maintain the following records: • SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to	Self-maintained records shall be available during inspections or upon request.

	document and/or estimate SSO Volume.	

Chapter 3 SSO Response Procedures

This section describes the procedures for responding to an SSO from the time that the first responders are dispatched through containment of the spill.

3.1 Customer Relations Practices

As a representative of the District, you will occasionally have to deal with an irate homeowner. A sewer backup is a stressful event and even a reasonable homeowner can become irate if it is perceived that staff members as being indifferent, uncaring, unresponsive, and/or incompetent.

Although sometimes difficult, effective management of a sewage backup situation is critical. If it is not managed well, the situation can end up in a costly, prolonged process with the homeowner. The homeowner should feel assured that the District is responsive and the homeowner's best interest is a top priority.

It is important for employees to communicate effectively with customers, especially in sewage backup situations. How we communicate – on the phone, in writing, or in person – is how we are perceived. Good communication with the homeowner results in greater confidence in our ability to address the problem satisfactorily, less chance of having the homeowner prolong the claims process, and less chance of the customer exaggerating the damage done on the property.

Here are a few communication tips:

- Give the homeowner ample time to explain the situation or to vent. Show interest in what the homeowner has to say, no matter how many times you have heard it before, or how well you understand the problem.
- As soon as possible, let the customer know that you will determine if the source of the sewer backup is in the sewer main and, if it is, will have it corrected as quickly as you can.
- Acknowledge the homeowner's concerns. For example, if the homeowner seems angry or worried about property damage, say something like, "I understand that you're concerned about the possible damage to your property, but a professional cleanup crew can restore the area."
- Express understanding and empathy for any inconveniences caused by the incident, but do not admit fault. If it is determined that the District is at fault, the property owner has the right to file a claim for any reasonable repairs or losses resulting from the incident.
- As much as possible, keep the homeowner informed on what is being done and will be done to correct the problem.
- Keep focused on getting the job done in a very professional manner. Don't wander from the problem with too much unnecessary small talk with the homeowner.
- Don't find fault or lay blame on anyone.

3.2 First Responder Priorities

The first responder's priorities are:

- To follow safe work practices.
- To respond promptly with the appropriate equipment.
- To evaluate the cause of spill and determine responsibility.
- To restore the flow as soon as possible.
- To contain the spill whenever feasible.
- To minimize public access to and/or contact with the spilled sewage.

- To promptly notify the District Manager or appropriate District personnel in event of major SSO.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible).

3.3 Safety

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. Special consideration should be given to following all local traffic, confined space, and safety procedures.

3.4 Initial Response

All sewer system calls require a response to the reported location of the event in an attempt to minimize or eliminate an overflow. The first responder must respond to the reporting party or site of the problem and initiate response activities within 60 minutes after initial reporting of the spill to the District or its emergency response contractor (Roto-Rooter). If the responder cannot be at the spill location within 60 minutes after the spill, then the late response shall be reported per the requirements in Chapter 6.

The first responder should determine appropriate response measures based on the circumstances and information provided by the caller (e.g. weather and traffic conditions, small backup vs. sewage flowing on the ground, etc.). If additional help is needed, contact other employees, contractors, and/or equipment suppliers. Contact information for the District personnel is available in the Appendix 3. A comprehensive Emergency Contact List can be found in Appendix 2. Based on available information, the first responder should determine if a combination sewer cleaning truck and/or a spill response vehicle is needed.

Upon arrival at the site, the first responder should:

- Note arrival time at spill site (include in Sanitary Sewer Overflow Service Call & Field Report Form in Appendix 4).
- Verify the existence of a sewer system spill or backup.
- Field verify the address and nearest cross street, making sure it's part of the District's sewer/conveyance system.
- Identify and clearly assess the affected area and extent of spill.
- Comply with all safety precautions (traffic, confined space, etc.)
- Contact caller, if time permits.
- Notify the District Manager if:
    - The spill appears to be large, in a sensitive area, or there is doubt regarding the extent, impact, or how to proceed; or
    - Additional help is needed for line cleaning or repair, containment, recovery, lab analysis, and/or site cleanup.

3.5 Restore Flow

Upon arrival at the location of a spill into a house or a building, the first responder should evaluate and determine if the spill was caused by a blockage in the lateral or in the District owned sewer main, caused either by a backup in the sewer main line or nearby O&M activities.

- If a blockage is found in a property owner's lateral, it should be clearly communicated that it is not the District's responsibility to work on a private lateral.
- If a backup in the main line is found to have caused the SSO in a house or building, relieve the blockage in the main line and see Section 4.6 for Claims and Restoration Firm information.

The first responder should attempt to remove the blockage from the system and restore flow to the area. Using the appropriate cleaning tools, the field crew should set up downstream of the blockage and hydro-clean upstream from a clear manhole. The flows should be observed to ensure that the blockage does not recur downstream.

If the blockage cannot be cleared within a reasonable time, or sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If assistance is required, immediately contact other employees, contractors, and equipment suppliers. A First Responder Contact List can be found in Appendix 3, and an Emergency Contact List is in Appendix 2.

3.6 Contain the Spill

The first responder should attempt to contain as much of the spilled sewage as possible using the following steps:

- Determine the immediate destination of the overflowing sewage.
- Plug storm drains using available equipment and materials to contain the spill, whenever appropriate. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drainage facilities.
- Contain/direct the spilled sewage using dike/dam or sandbags.
- Pump around the blockage/pipe failure/pump station or vacuum flow from upstream of the blockage and dispose of downstream of the blockage to prevent further overflow.
- When an SSO occurs inside of a house or building, the first responder should provide a copy of the residential sewage contamination flyer in Appendix 10 and the property owner should be instructed to follow these guidelines:
    - Keep all family members and pets away from the affected area.
    - Place towels, rags, blankets, etc between areas that have been affected and areas that have not been affected.
    - Do not remove any contaminated items
    - Turn off the HVAC system
    - Move any uncontaminated property away from the overflow area.
- NOTE: If an SSO reaches a water body, see Section 4.3 for Water Quality Sampling requirements.

3.7 SSO Notification Signage and Restrict Public Access

Barriers shall be installed to prevent the public from having contact with the sewage if possible. Signs should be posted to keep vehicles and pedestrians away from contact with spilled sewage. Do not remove the signs until directed by the District Manager. A sample warning sign is included as Appendix 5. Additional information about posting signs and public notification during major SSOs is included in Chapter 5 of this document.

Chapter 4 Recovery and Clean Up

The recovery and clean up phase begins when the flow has been restored and the spilled sewage has been contained to the extent possible.

4.1 Recovery of Spilled Sewage

Vacuum up or pump the spilled sewage and discharge it back into the sanitary sewer system.

4.2 Clean Up and Disinfection

Clean up and disinfection procedures should be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and should be modified as required for wet weather conditions. Where clean up is beyond the capabilities of District staff, a cleanup contractor will be used.

4.2.1 Private Properties

If a sewage backup occurs inside a building or on private property, provide a copy of the residential sewage contamination flyer in Appendix 10 to the resident(s).

The homeowner is responsible for clearing any blockage in the home's plumbing system or private lateral and for any resulting flood damage to the structure. The homeowner is also responsible for damage that happens because a lateral was not properly installed. Spills inside houses or buildings should be cleaned up by a professional cleaning company. Contact information for professional cleaning companies can be found in the "Water Damage Restoration" section of the Yellow Pages.

If the sewage backup is located inside a building or on private property and the backup was caused by a blockage in the public sewer main, the agency may be responsible for cleanup and restoration. If this is the case, the agency will arrange for a water damage restoration company. Claims by homeowners, if applicable, should be submitted based on information in Section 4.6 of this document.

4.2.2 Hard Surface Areas

- Collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms.
- Take reasonable steps to contain and vacuum up the wastewater.
- Disinfect all areas that were contaminated from the overflow using the disinfectant solution of household bleach diluted 10:1 with water. Apply minimal amounts of the disinfectant solution using a hand sprayer. Document the volume and application method of disinfectant that was employed.
- Allow area to dry. Repeat the process if additional cleaning is required.

4.2.3 Landscaped and Unimproved Natural Vegetation

- Collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms.
- Allow the area to dry. Repeat the process if additional cleaning is required.

4.2.4 Natural Waterways

The California Department of Fish and Game (CDFG) should be notified in the event an SSO impacts any creeks, gullies, or natural waterways. CDFG will provide the professional guidance needed to effectively clean up spills that occur in these sensitive environments. Clean up should proceed quickly in order to minimize negative impact. Any water that is used in the cleanup process should be de-chlorinated prior to use.

4.2.5 Wet Weather Modifications

Omit flushing and sampling during heavy storm events with heavy runoff where flushing is not required and sampling would not provide meaningful results.

4.3 Water Quality Sampling

Water quality sampling and testing is required whenever spilled sewage enters a water body to determine the extent and impact of the SSO. The following guidelines must be followed:

- The first responder should notify District Manager to collect samples. Samples should be collected as soon as possible after the discovery of the SSO event.
- For spills less than 1,000 gallons, at a minimum water quality samples should be collected at the discharge point, 100 feet upstream, and 100 feet downstream.
- If a spill is more than 1,000 gallons, additional sites should be sampled; recommendations should be given according to County of Marin Environmental Health Services (EHS) requirements.

The water quality sampling procedures, which are the same as the EHS procedures are:

- Keep the sterile collection bottle closed until it is to be filled. Do not contaminate inner surface of the lid or bottle rim.
- Collect water sample just below the surface in knee deep water, approximately 3 feet deep (full arm's length), without rinsing. If needed, extend the sampling pole to the fullest length to reach deeper water depth. Minimize contact with bank or beach bed as water fouling may occur.
- Remove cap and hold the bottle near its base and plunge it, neck downward, below the surface. Turn bottle until neck points slightly upward and mouth is directed toward the current. Fill bottle leaving about 1 inch of air to allow lab to mix by shaking. Collect a minimum of 100 mL. (If applicable, insert sterile collection bottle into the holder on the sample pole. Extend the sample pole and plunge bottle end into the water, bottle opening downward.)
- Immediately place cap securely on bottle to avoid leaks and contamination.
- Dry the bottle.
- Label container with distinctive sample site name, date, and time collected.
- Complete the laboratory requisition slip with requested information (site, bottle number, collector, date and time of collection, type of sample, test requested, name and phone number of responsible person for reporting purposes, and deliverer name). Note any field observations that may have occurred during the sampling.
- Test samples from SSO events for ammonia, dissolved oxygen, fecal coliform, total coliform and enterococcus. The method of analysis for ammonia and dissolved oxygen may be a readily available, good quality test kit, suitable for field analysis.

Samples should be stored and shipped according to the following procedures:

- Place water sample bottle in a cooler with frozen blue ice. Water sample must be kept cool. Ice may be used but care must be taken so water samples are not contaminated or diluted by the ice.
- Bring to a California state-certified laboratory within 8 hours of collection. For compliance tests, the holding time must not exceed 8 hours from the time of collection to time of processing or the tests will be invalidated. Other water tests for non-compliance purposes may be held below 10 degrees C until the time of analysis, up to 24 hours.
- Water samples may be taken to the **SASM Laboratory at 450 Sycamore Avenue, Mill Valley, CA 94941, (415) 388-2402.** The water samples must be brought to the laboratory within 8 hours of collection, before 3:00 pm, for processing.

- If the SASM laboratory is closed, utilize an alternate testing laboratory managed by **Caltest Analytical Laboratory at 1885 N Kelly Rd., Napa, CA 94558 (707) 258-4000, Toll Free 888-258-TEST (8378), Fax: 707.226.1001.**

Records of monitoring information shall include the date, exact place, and time of sampling or measurements, the individual(s) who performed the sampling or measurements, the date(s) analyses were performed, the individual(s) who performed the analyses, the analytical technique or method used, and the results of such analyses.

If deemed necessary by County EHS, sampling must be tested for compliance with Public Beach Sanitation and Ocean Water-Contact Sports bacteriological standards.

A single sample exceeds the standard if:

- Total coliform bacteria are > 1,000 per 100 mL sample, if the ratio of fecal/total coliforn bacteria exceeds 0.1; or
- Total coliform bacteria are > 10,000 per 100 mL sample; or
- Fecal coliform bacteria are > 400 per 100 mL sample; or
- Enterococcus bacteria > 104 per 100 mL of sample.

The mean value of at a least five weekly consecutive samples during any 30-day sampling period exceeds the standards if:

- Total coliform bacteria > 1,000 per 100 mL of sample; or
- Fecal coliforn bacteria are > 200 per 100 mL sample; or
- Enterococcus bacteria are > 35 per 100 mL sample.

If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the District or its agent(s), as a result of any SSO, records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements;
- The individual(s) who performed the sampling or measurements;
- The date(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical technique or method used; and
- The results of such analyses.

4.4 Estimate the Volume of Spilled Sewage

Use the methods outlined in Appendix 6 to estimate the volume of the spilled sewage.

Some spills may occur in locations where the wastewater can seep into the ground or flow away from the spill location. In such conditions, consider when the spill was first detected and observations from bystanders in order to determine the total spill volume.

4.5 Follow Up Activities

If sewage has reached the storm drain system, the combinations sewer cleaning truck should be used to vacuum/pump out the catch basin and any other portion of the storm drain that may contain sewage.

In the event that an overflow occurs at night, the location should be reinspected first thing the following day. The operator should look for any signs of sewage solids and sewage-related material that may warrant additional cleanup activities.

4.6 Claims for Backups into a Building

The responder to a sewer backup into a house or building should

- Gather information and fill out the Sewer Backup Summary Report in Appendix 7.
- Notify the District Manager of the incident.
- Wait for restoration firm to arrive.
- Forward incident reports and related documents to District Manager.

For potential claims, follow District policies.

Chapter 5 Public Notification

5.1 Spills that do not Reach Public Waters

For spills that are contained and do not release unrecovered sewage into a storm drain, stream or a surface water body, notification to the public shall be accomplished through the use of signs at the location of the spill. See Chapter 3.7 and Appendix 5 for guidelines on the installation of signs for these types of spills.

5.2 Spills that Reach Public Waters - County EHS Requirements

The EHS Deputy Director shall determine if a field investigation of the discharge site and potentially affected areas is required. If possible, verify the extent of the contamination in the field before the water body closure decision is made. During the field investigation, EHS staff shall notify the Deputy Director of their findings by telephone.

Creeks, streams and beaches that have been contaminated as a result of an SSO should be posted at visible access locations until the risk of contamination has subsided to acceptable background levels. The warning signs, once posted, should be checked every day to ensure that they are still in place. “Closed” signs shall be posted at the outfall and a minimum of 100 feet upstream and 100 feet downstream of the discharge. If there is a large volume of sewage, more signs must be posted downstream.

Signs must remain posted until at least two consecutive days of samplings meet the Public Beach Sanitation and Ocean Water-Contact Sports standards as listed in Section 4.3 of this document. In the event where background levels of the water bodies may exceed the standards, EHS will analyze available test results, the situation at hand, and/or require more testing to determine if the Public Beach Sanitation and Ocean Water-Contact Sports standards can be met. The removal of signs must be approved by EHS and the County Public Health Officer.

EHS has the authority to close and re-open the beaches and water bodies for public water contact. The water bodies affected are determined by the following parameters and best professional judgment:

- The volume of sewage discharged;
- Parameters affecting flow of sewage to the water bodies;
- Direction of current;
- Tides;
- Past experience in the area; and/or
- Any other pertinent information.

5.3 Point of Contact

The District Manager shall be responsible for public notification, if necessary.

Chapter 6 SSO Documentation and Reporting

All SSOs should be thoroughly investigated and documented for use in managing the sewer system and meeting established reporting requirements.

6.1 Internal SSO Documentation

6.1.1 Category 1, 2 and 3 SSOs

The first responder will complete a work order and Field Report (Appendix 4). The first responder will follow the procedures and complete the Sewer Backup Summary Report (Appendix 7) if an SSO has occurred in a residence or building.

The District Manager will prepare a file for each individual SSO. The file should include the following information:

- Initial service call information
- Collection System Service Call & Overflow Field Report Form (Appendix 4)
- Copies of the California Integrated Water Quality System (CIWQS) report forms
- Volume estimate
- Closed-Circuit Television (CCTV) inspection (optional for Category 2 SSOs that are not blockage related)
- Water quality sampling and test results, if applicable

6.1.2 Failure Analysis Investigation (OPTIONAL)

The objective of the failure analysis investigation is to determine the "root cause" of the SSO and to identify corrective action(s) needed that will reduce or eliminate future potential for the SSO to recur.

When this optional investigation is deemed necessary, the investigation should include reviewing all relevant data to determine appropriate corrective action(s). The investigation should include:

- Reviewing and completing the Field Report (Appendix 4);
- Reviewing past maintenance records;
- Conducting a CCTV inspection to determine the condition of the line segment immediately following the SSO and reviewing the video and logs; and
- Interviewing staff who responded to the spill.

The product of the failure analysis investigation should be the determination of the root cause and the identification of the corrective actions. The Collection System Failure Analysis Form (Appendix 8) should be used to document the investigation.

6.2 External SSO Documentation

The GWDR requires that individual SSO records be maintained by the District for a minimum of **five years** from the date of the SSO. This period may be extended when requested by a RWQCB Executive Officer. All records shall be made available for review upon SWRCB, RWQCB, or EPA staff's request. Records shall be retained for all SSOs, including but not limited to the following when applicable:

- Copy of Certified CIWQS report;
- All original recordings for continuous monitoring instrumentation;
- Service call records and complaint logs of calls received by the District;
- SSO calls;

- SSO records;
- Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps;
- Work orders, work completed, and any other maintenance records from the previous five years which are associated with responses and investigations of system problems related to SSOs;
- A list and description of complaints from customers or others from the previous five years; and
- Documentation of performance and implementation measures for the previous five years.

6.3 Internal SSO Reporting Procedure

6.3.1 Category 1 SSO

The first responder will immediately notify the District Manager. The first responder will fill out the Field Report and turn it in to the Legally Responsible Official (LRO). The District Manager, or their designee, will meet with field crew(s) at the site of the SSO event to assess the situation. In the event of a very large overflow or an overflow in a sensitive area, the District Manager may notify the Board of Directors.

6.3.2 Category 2 SSO

The first responder will fill out the Field Report and turn it in to the LRO.

6.4 External SSO Reporting Procedure

6.4.1 SWRCB Requirements (CIWQS)

The CIWQS electronic reporting system should be used for reporting SSO information to the SWRCB whenever possible. A flow chart showing the external reporting response requirements based on the type of SSO is included as **Figure 6-1** and a check list with contact information is included as **Figure 6-2**.

Figure 6-1: External Reporting Requirement Flow Chart

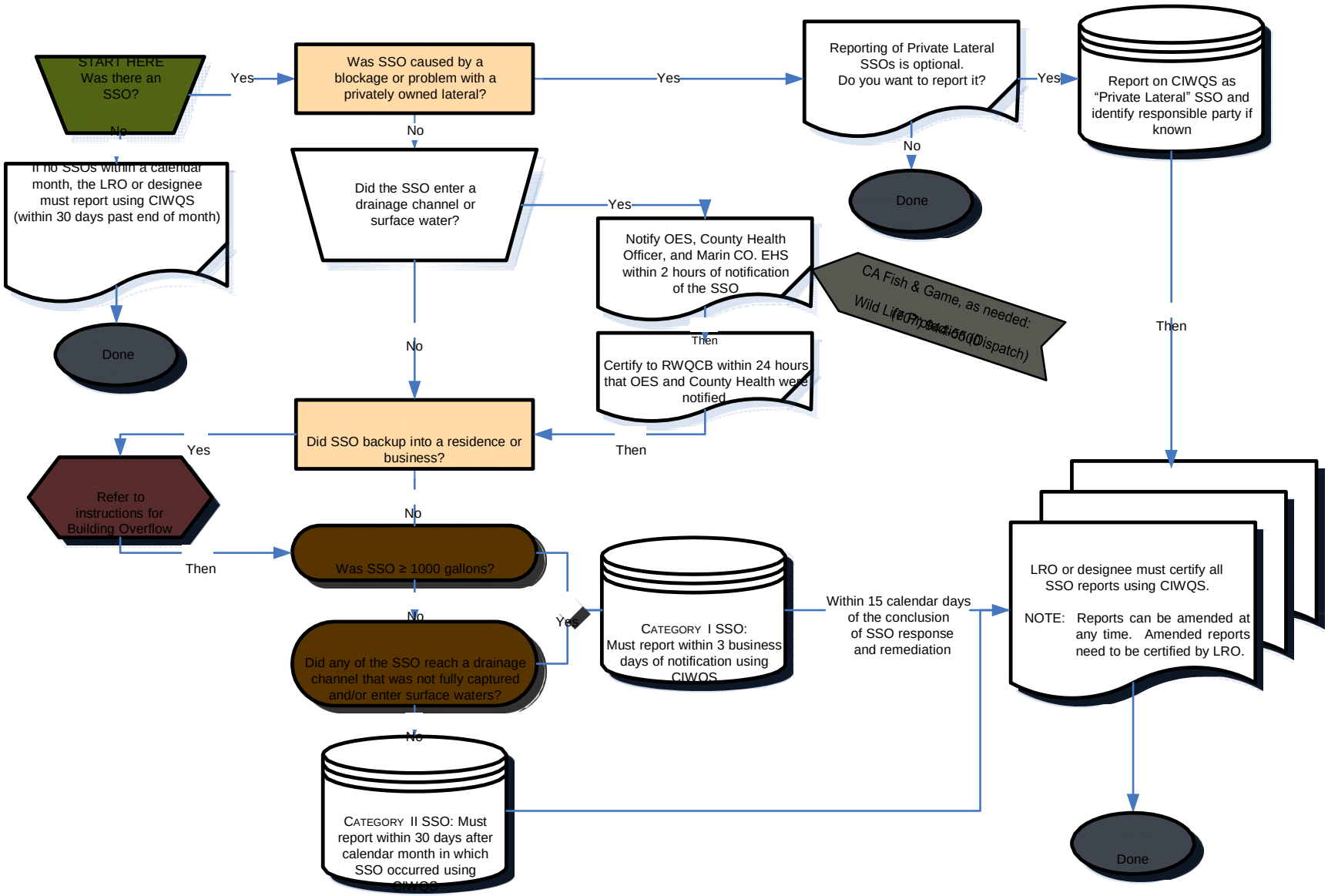


Figure 6-2: External Reporting Requirement Check List

Reporting & Certification Checklist

Category 1 SSOs that reach Surface Waters

2-Hour Notification: Regulatory Agencies (OES, County Health, RWQCB) must be notified within two hours of ANY discharge of sewage (untreated/partially treated) to a surface water or drainage channel (that is not fully captured and returned to sewer).

24-Hour Certification: Any SSO requiring notification based on the two-hour rule must be followed up with a certification submitted to the RWQCB within 24 hours.

Within 3 Business Days of Notification: As a Category I SSO, it must be reported to SWRCB using CIWQS.

Within 15 Calendar Days of Conclusion of Response/Remediation:

Must be certified by LRO using CIWQS.

Category 1 SSOs that do not reach Surface Waters

Within 3 Business Days of Notification (SWRCB/CIWQS): As a Category I SSO, it must be reported to SWRCB using CIWQS.

Within 15 calendar Days of Conclusion of Response/Remediation: Must be certified by LRO using CIWQS.

Category 2 SSOs (1,000 or more, no Property Damage or Surface Waters)

Within 3-Days submit draft and certified within 30 calendar days of end of month spill occurred . After End of Calendar Month with SSO Event: Must be reported to SWRCB using CIWQS; Must be certified by LRO using CIWQS.

Category 3 SSOs: Submit certified response within 30 Calendar days

Negative Reporting (No SSOs in Month)

Within 30 days past the end of the month: The LRO or designee must report using CIWQS.

Private Lateral SSOs (Reporting is Optional)

California Integrated Water Quality Systems (CIWQS)

SWRCB Reporting Timeframes Depend on the Size and Final Destination of the SSO.

- CIWQS must be used for reporting if the website is available (http://ciwqs.waterboards.ca.gov)
  - User Name: xxxx Password: xxxx
  - Waste Discharge Identification Number (WDID) #xxxxx
  - The SSO database will automatically generate an email notification with customized information about the SSO upon initial reporting and final certification for all Category I SSOs.
  - Emails will be sent to the EHS and the San Francisco Bay RWQCB
- Fax RWQCB (only if website is down)

Two-Hour Notification / 24-Hour Certification

1. **State Office of Emergency Services (OES)**
   Phone: (800) 852-7550; Make sure you ask for an "OES Control Number" (for RWQCB)
2. **Marin County Environmental Health Services**
   Phone - Day: (415) 499-6907 Night: (415) 499-7235 (Sheriff's Communication Center)
   County Health Officer: (415) 473-3703
3. **RWQCB Region 2 (San Francisco Bay)**
   Option of phoning in the 2-hour notification and follow up within 24 hours using the online certification or utilize the online feature for both.

Phone (2-Hour Notification)		Online (2-Hour and/or 24-Hour Certification)
Phone - Day	(510) 622-2300	• www.wbers.net or www.r2esmr.net/sso_login2.asp
Phone - Night	(510) 622-2369	• User Name: xxxx Password: xxxx
		• Locate and open the 2-Hour/24-Hour form
		• Record OES Control Number on top of the page & complete form
		• Send "confirming" emails (followed up with a phone call) to the EHS Director and other appropriate agencies. Add your email

Sanitary Sewer Overflow (SSO)

Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system that:

(i) Reach waters of the United States (including storm drains, unless fully captured and returned to sanitary sewer system);
(ii) Do not reach waters of the United States; or
(iii) Backs up into buildings and on private property that are caused by SASM-owned lines.

Category 1 SSOs that reach Waters of the State

If a Category 1 SSO results in a discharge to **Waters of the State** (a drainage channel or surface water, if not fully recovered), the reporting requirements as described in this section apply.

Within 2 hours of being notified of the spill event, the District Manager, or their designee, will:

- Notify Office of Emergency Services (OES) (800.852.7550) and obtain spill number for use in other reports;
- Notify the County of Marin Environmental Health Services (415.499.6907); and County Health Officer (4150 473-3703
- Prepare an initial notification to the RWQCB (www.wbers.net or www.r2esmr.net/sso_login2.asp).[1]

Within 3 business days of being notified of the spill event, District Manager, or their designee, will certify the initial report using CIWQS.

Within 15 calendar days of the conclusion of SSO response and remediation, District Manager, or their designee, will certify the final report using CIWQS.

The District Manager, or their designee, will update the certified report as new or changed information becomes available. The updates can be submitted at any time and must be certified.

Category 2 SSOs that Do Not Reach Waters of the State

Within 3 business days of being notified of the spill event, the District Manager, or their designee, will certify the initial report using CIWQS.

Within 15 calendar days of the conclusion of SSO response and remediation, the District Manager, or their designee, will certify the final report using CIWQS.

The District Manager, or their designee, will update the certified report as new or changed information becomes available. The updates can be submitted at any time and must be certified.

Category 3 SSOs

Within 30 calendar days after the end of the calendar month in which the SSO occurs, the District Manager, or their designee, will submit an electronic report using CIWQS. The District Manager, or their designee, will certify the report. The report will include the information to meet the GWDR requirements.

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[1] In the event a discharger is unable to provide online notification within 2 hours of becoming aware of an SSO, it shall phone the RWQCB's spill hotline at (510) 622-2369 and convey the same information contained in the notification form. In cases where the discharger satisfies 2-hour notification requirements via phone, it must still provide online notification to the RWQCB within 3 business days of becoming aware of a SSO.

[2] In most instances, the 2-hour notification will also satisfy 24-hour certification requirements. This is because the notification form includes fields for documenting that OES and the local health department has been contacted. In other words, if a discharger is able to complete all the fields in the notification form within 2 hours, certification requirements are also satisfied. In the event a discharger is unable to provide online certification within 24 hours of becoming aware of an SSO, it shall phone the RWQCB's spill hotline at (510) 622-2369 and convey the same information contained in the certification form. In addition, within 3 business days of becoming aware of an SSO, the certification information must also be entered into the RWQCB's online system in electronic format.

Private Lateral Sewage Discharges

The District Manager, or their designee, may report private lateral SSOs using CIWQS, specifying that the sewage discharge occurred and was caused by a private lateral and identifying the responsible party (other than the District), if known.

Monthly No Spill Certification

If there are no SSOs during the calendar month, the District Manager, or their designee, will submit an electronic report that the District did not have any SSOs, **within 30 calendar days after the end of each calendar month**. The District Manager, or their designee, will certify the report.

CIWQS Not Available

In the event that CIWQS is not available, the District Manager, or their designee, will fax all required information to the RWQCB office in accordance with the time schedules identified above. In such event, the District will submit the appropriate reports using CIWQS as soon as practical. The San Francisco Bay RWQCB (Region 2) fax number is (510) 622-2460.

6.4.2 EPA Reporting Requirements

On the fifteenth day of January, April, July, and October in each year in which activities are conducted pursuant to the EPA Administrative Order, District shall submit a tabulation of all sewage spills occurring during the previous calendar quarter. The quarterly reports shall indicate, for each spill, the spill date, spill volume, volume recovered, spill location, cause, and spill destination. Certified and uncertified spill reports submitted to the SWRCB's CIWQS during the previous calendar quarter may be included.

If the District cannot be at the spill location within 60 minutes after becoming aware of the spill, the late response shall be reported as part of the quarterly spill report. The District will include in the quarterly spill report a description of all late responses, reasons for each late response, and steps that will be taken to improve the response time.

Chapter 7 Equipment Inventory

Roto-Rooter maintains a stock of emergency response equipment which is available if needed for SSO response. The Roto-Rooter equipment inventory is included as Appendix 9. The District does not maintain specialized equipment to support SSO response.

SASM maintains water quality sampling kits for the District that include:

- Sterile plastic bottles, 125 mL and 250 mL
- Laboratory requisition forms
- Styrofoam container, ice chest, or equivalent
- Blue ice packs, frozen
- Waterproof marker and ballpoint pen
- Labels for collection bottles
- Towel for drying bottles
- Sampling pole for collecting samples
- Rubber boots and/or rubberized waders

These supplies meet EHS standards for proper water quality sampling.

Chapter 8 SSO Response Training

This section provides information on the training that is required to support this Sanitary Sewer Overflow Response Plan.

8.1 Employees and Contractor Employees

8.1.1 Initial and Annual Refresher Training

All District personnel and contractor employees who may have a role in responding to, reporting, and/or mitigating a sewer system overflow should receive training on the contents of this SSORP. All new employees should receive training before they are placed in a position where they may have to respond. Current employees should receive annual refresher training on this plan and the procedures to be followed.

8.1.2 SSO Training Record Keeping

The District Manager keeps records of all training that is provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event should include date, time, place, content, name of trainer(s), and names of attendees.

Appendix 1 - Overflow Response Standard Operating Procedures

Appendix 1 - Overflow Response SOP

The purpose of this Standard Operational Procedure (SOP) is to aid staff in prompt and responsible SSO response and is intended only as a condensed version of the Sanitary Sewer Overflow Response Plan (SSORP).

Addressing Service Calls

- When a report of a sewer spill or backup is made, District staff receives the call, takes the information from the caller, and fills out the first section of Field Report (SSORP Appendix 4).
- The District staff who took the call verbally communicates it to the District Manager (do not leave a voicemail) along with any information collected on the Field Report.
- The District Manager, or appropriate District personnel, then notifies the emergency response contractor (Roto-Rooter), which responds to the incident and then files a report to the District as soon as possible.
- The District Manager or the emergency contractor shall field verify the address and nearest cross street, making sure it's part of the District's conveyance system. If not, provide the caller with the phone number of the responsible agency and follow up by calling the agency yourself, providing the details of the call. Neighboring agency contact information is included in the Emergency Contact List (SSORP Appendix 2). Provide assistance if requested.
- The response measures will be based on the information provided by the caller (weather and traffic conditions, small back up vs. sewage flowing on the ground, etc). If additional help is needed, the District Manager will contact other employees, contractors, and/or equipment suppliers as listed in the Emergency Contact List (SSORP Appendix 2) and the First Responders Contact List (SSORP Appendix 3).

Responding to SSOs

- The First Responder shall visit the site immediately in an attempt to minimize or eliminate an overflow. Respond with the combination sewer cleaning truck and/or spill response vehicle depending on the situation.
- Upon arrival at the site, clearly assess the situation and comply with all safety precautions (traffic, confined space, etc.) and verify the existence of a sewer system spill or backup.
- Identify and assess the affected area and extent/impact of the spill and request additional help as needed for line cleaning or repair, containment, recovery, lab analysis and site cleanup.
- Using the appropriate cleaning equipment, set up downstream of the blockage and hydro clean upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not recur downstream.
- If the blockage cannot be cleared within a reasonable time or conveyance system requires construction repairs, contingency plans must be employed as needed, including containment, bypass pumping, contractual assistance etc. If assistance is required, immediately contact other employees, contractors and equipment suppliers as required. See Emergency Contact List and First Responders Contact List (included as SSORP Appendices 2 and 3, respectively).
- Signs warning the public of a sewage release should be posted in the affected area. Use barricades, caution tape, cones, etc. as needed. (SSORP Appendix 5). Warning signs

should remain posted until the District Manager approves their removal. For larger spills that reach surface water bodies, the District Manager may have to receive approval from the County of Marin Environmental Health Services Department or Regional Water Quality Control Board staff.

- If the spill or overflow volume equals or exceeds 1,000 gallons or the spill is in a sensitive area, sampling shall be conducted in accordance with Chapter 4 of the SSORP.
- The response crew shall complete the Field Report (SSORP Appendix 4) and provide copies as stated at the bottom of the report.
- SSO Notification and Reporting: Accurate and responsive reporting is vital. Refer to the SSO External Reporting Requirement Flow Chart (SSORP Figure 6-1).

Home or Business Back Ups

In the event of a backup into a home or business, SSORP Chapter 4 shall be used to guide staff through the process.

REFERENCES

Addressing Service Calls

- *Sanitary Sewer Overflow Field Report Form (SSORP Appendix 4)*
- *Emergency Contact List (SSORP Appendix 2)*
- *First Responders Contact List (SSORP Appendix 3)*

Responding to SSOs

- *Collection System Failure Analysis Form (SSORP Appendix 8)*
- *Methods for Estimating Spill Volume (SSORP Appendix 6)*
- *Sample Warning Sign (SSORP Appendix 5)*
- *SSO External Reporting Requirement Flow Chart (SSORP Figure 6-1)*
- *Emergency Response Inventory List (SSORP Appendix 9)*

Appendix 2 - Emergency Contact List

Appendix 2 – Emergency Contact List

Neighboring Agencies

Agencies	Phone Number
Alto Sanitary District	415.388.3696
City of Mill Valley	415.388.4033
City of Sausalito	415.289.4113
Homestead Valley Sanitary District	415.388.4796
Richardson Bay Sanitary District	415.388.1345
Sausalito Marin City Sanitary District	415.332.0244
Sewerage Agency of Southern Marin	415.388.2402
Tamalpais Community Services District	415.388.6393

Homestead Valley Maintenance Contractors

Company	Phone Number
Pipeline Contractors	
Roto-Rooter	415.388.2740
Maggiora & Ghilotti	415.459.8640; [redacted]
Ghilotti Bothers	415.454.7011
Forde Construction	415.924.3072; [redacted]
Team Ghilotti	415.720.5936
2,000 gallon tank trucks	
Mountain Sewer Service	415.383.6000
Roto-Rooter	415.388.2740
Roy's Sewer Service	415.456.2320
4,000 gallon tank trucks	
Erickson (Richmond)	510.235.1393
IT Corporation (San Jose)	408.894.1200
Equipment Rental	
Big 4 Rents (Corte Madera)	415.924.4444
Davis Rents (San Rafael)	415.454.1225
Welders	
Zappetini & Son	415.454.2511
Sun Ironworks	415.453.7562
Plating or Shoring	
Plank Inc.	707.763.7070
Baker Tanks	510.439.8251

Appendix 3 – First Responder Contact List

Homestead Valley Sanitary District

Name	Title	Home	Cell	Pager
Bonner Beuhler	District Manager	[redacted]	[redacted]	[redacted]

ROTO-ROOTER PLUMBERS
License # 288461

Tel 415.898.2700 Fax 415.898.6074 www.rotorooter.com
P.O. Box 3415 San Rafael, California 94912

MANAGER PHONE NUMBERS

Employee Name	Email	Verizon Number	Home Number
Clyde Klyse		[redacted]	[redacted]
Adam Gallagher	adam@marin-rotorooter.com		
Mendy Calegari	mendy@marin-rotorooter.com		

OFFICE EMPLOYEE PHONE NUMBERS

Tina Atkinson	tina@marin-rotorooter.com	[redacted] (Office cell phone)
Jen Giuntini	jen@marin-rotorooter.com	

SERVICE TECHNICIAN PHONE NUMBERS

Employee Name	Verizon Number	Home Number
Joe Lewis	[redacted]	[redacted]
Rob Murphy		
Mike Quecke		
John Selhorst		
Steve Smith		
Jared Skaggs		

CREW TECHNICIAN PHONE NUMBERS

Mike Caldwell	[redacted]	[redacted]
Nick Caldwell		
Mike Ferreira		
Mike Gomez		
Allan Lee		
Fred Pajkos		
Luis Rosas		
Steven Seidler		
JD Thomas		

Appendix 4 - Sanitary Sewer Overflow Service Call & Field Report Form

Appendix 4 – Sanitary Sewer Overflow Service Call & Field Report Form

INITIAL INFORMATION

DATE:	CALL RECEIVED: AM / PM
RECEIVED BY:	CALLER'S NAME:
CALLER'S PHONE #:	CALLER'S ADDRESS:
SPILL LOCATION NAME / LOCATION OF OVERFLOW:	CROSS STREET:
TIME AND NAMES OF CREW MEMBERS CONTACTED:	
DESCRIPTION OF COMPLAINT:	

THis field report, gas detector, radio, system maps, personal protective equipment and camera should be collected by field crew prior to responding.

WORK ORDER NO:	
FREQUENCY OF CLEANING PROGRAM:	DATE OF LAST CLEANING:
RECOMMENDATIONS ON HOW TO ELIMINATE FUTURE PROBLEMS:	
FAILURE ANALYSIS COMPLETE: ☐ YES ☐ NO	DATE:

Distribute field report immediately Manager.

FIELD REPORT FOR RESPONSE CREW'S USE

TIME MOBILIZED: AM / PM		CREW:	
TIME ARRIVED AT SITE: AM / PM			
FORM COMPLETED BY:		DATE:	
ASSET #:	U/S ASSET #:	WORK AREA:	D/S ASSET#:
SIZE OF LINE:	LENGTH OF LINE:	EASEMENT: YES ☐ NO ☐	
GPS COORDINATES (LATITUDE / LONGITUDE; IF AVAILABLE):			

COMMENTS:

SKETCH OF AREA: (INCLUDE MANHOLES, INTERSECTIONS, STOPPAGE LOCATION, ETC.)

COMPLETE FORM IF AN OVERFLOW HAS OCCURRED

TIME OVERFLOW STARTED:	TIME OVERFLOW STOPPED:
DURATION OF SSO:	EST. SPILL VOLUME (GALLONS):
DESCRIBE HOW OVERFLOW QUANTITY WAS CALCULATED (APPENDIX 6 OF SSORP): • EYEBALL ESTIMATE • DURATION / FLOWRATE • MEASURED VOLUME • OTHER:_____	
DID SSO REACH STORM DRAINPIPE THAT WAS NOT FULLY RECOVERED? YES ☐ NO ☐	
DID SSO DISCHARGE TO DRAINAGE CHANNEL AND/OR SURFACE WATER? YES ☐ NO ☐	
IMPACTED SURFACE WATER(S) (IF APPLICABLE):	
IMPACTED BEACH(ES) (IF APPLICABLE):	
FINAL SSO DESTINATION: STORM DRAIN BUILDING YARD/LAND SURFACE WATER NO WATER INVOLVED CAPTURED FROM STORM DRAIN (100%) OTHER:_____	
VOLUME RECOVERED / RETURNED TO SEWER SYSTEM (GALLONS):	
VOLUME TO WATERS & NOT RECOVERED, INCLUDING SURFACE WATER, DRAINAGE CHANNEL, OR **NOT** RECOVERED FROM STORM DRAIN (GALLONS):	
FOR CONTINUING SPILLS WITHOUT COMPLETE BLOCKAGE REMOVAL AND/OR REPAIRS (IF APPLICABLE), CURRENT SPILL RATE (GALLONS PER MINUTE):	
WEATHER: SUNNY CLOUDY RAINY RAIN FOR SEVERAL DAYS	

PRIMARY CAUSE:				
ROOTS	GREASE	DEBRIS	VANDALISM	PIPE FAILURE
CONSTRUCTION DAMAGE		PUMP STATION FAILURE		POWER FAILURE
CAPACITY (HEAVY RAIN)			OTHER:_____	
ADDITIONAL INFORMATION:				

SPILL APPEARANCE POINT / SOURCE OF SSO: MANHOLE GRAVITY MAIN FORCEMAIN CLEAN OUT PRIVATE LATERAL PUMP STATION:_____(NAME) OTHER:_____		
BLOCKAGE LOCATION: UPSTREAM MH#: ____	PRIVATE LATERAL DOWNSTREAM MH#: ____	OVERFLOW MH#: ____
DESCRIBE CLEANUP METHOD:		
PHOTOS/VIDEO TAKEN: YES ☐ NO ☐	PHOTO/VIDEO FILE LOCATION:	
SAMPLES TAKEN BY:	LOCATION OF SAMPLES:	
DESCRIBE PROPERTY DAMAGE:		
SIGNS POSTED: YES NO ☐	NEIGHBORS NOTIFIED: YES ☐ NO ☐	
BARRICADED: YES ☐ NO ☐	OES NOTIFIED: YES ☐ NO ☐ ; DATE / TIME:_____	
OES CONTACTS/DETAILS:		
OES SSO#:		
RWQCB NOTIFIED: YES ☐ NO ☐ ; DATE / TIME:_____		
OTHER AGENCIES NOTIFIED:_____		
SSO INFORMATION FAXED TO RWQCB: YES ☐ NO ☐ ; DATE / TIME:_____		
CALLER/CUSTOMER NOTIFIED RE: STATUS: YES NO		
IF NOT, WHY:		
RECOMMENDED SPILL CORRECTIVE ACTIONS:		

Appendix 5 - Sample Warning Sign

WARNING

WATER CONTACT MAY CAUSE ILLNESS

¡ AVISO!

EL CONTACTO CON AGUA PUEDE CAUSAR ENFERMEDADES

BY ORDER OF THE HEALTH OFFICER
County of Marin
FOR FURTHER INFORMATION
CALL: (415) 499-6907

OR CALL

BONNER BEUHLER, DISTRICT MANAGER
HOMESTEAD VALLEY SANITARY DISTRICT
(415) 388-4796

WARNING

WATER CONTACT MAY CAUSE ILLNESS

¡ AVISO!

EL CONTACTO CON AGUA PUEDE CAUSAR ENFERMEDADES

BY ORDER OF THE HEALTH OFFICER
County of Marin
FOR FURTHER INFORMATION
CALL: (415) 499-6907

OR CALL
BONNER BEUHLER, DISTRICT MANAGER
HOMESTEAD VALLEY SANITARY DISTRICT
(415) 388-4796

Appendix 6 - Methods for Estimating Spill Volume

Appendix 6 - Methods for Estimating Spill Volume

A variety of approaches exist for estimating the volume of a sanitary sewer spill. This appendix documents the three methods that are most often employed. The person preparing the estimate should use the method most appropriate to the sewer overflow in question and use the best information available.

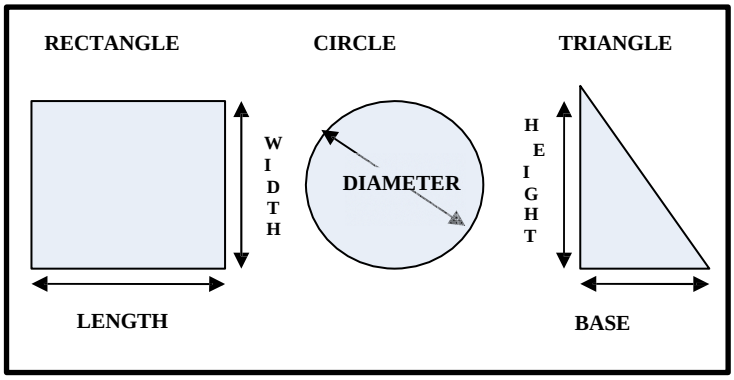
Method 1: Eyeball Estimate

The volume of small spills can be estimated using an "eyeball estimate". To use this method imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 gallons. This method is useful for contained spills up to approximately 200 gallons.

Method 2: Measured Volume

The volume of most small spills that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Common Shapes and Dimensions



Step 1 Sketch the shape of the contained sewage (see figure above).

Step 2 Measure or pace off the dimensions.

Step 3 Measure the depth at several locations and select an average.

Step 4 Convert the dimensions, including depth, to feet.

Step 5 Calculate the area in square feet using the following formulas:

Rectangle: Area = length (feet) x width (feet)

Circle: Area = diameter (feet) x diameter (feet) x 0.785

Triangle: Area = base (feet) x height (feet) x 0.5

Step 6 Multiply the area (square feet) times the depth (in feet) to obtain the volume in cubic feet.

Step 7 Multiply the volume in cubic feet by 7.5 to convert it to gallons

Method 3: Duration and Flowrate

Calculating the volume of larger spills, where it is difficult or impossible to measure the area and depth, requires a different approach. In this method, separate estimates are made of the duration of the spill and the flowrate. The methods of estimating duration and flowrate are:

Duration

The duration is the elapsed time from the time the spill started to the time that the flow was restored.

Start Time: The start time is sometimes difficult to establish. Here are some approaches:

1. Local residents can be used to establish start time. Inquire as to their observations. Spills that occur in rights-of-way are usually observed and reported promptly. Spills that occur out of the public view can go on longer. Sometimes observations like odors or sounds (e.g. water running in a normally dry creek bed) can be used to estimate the start time.
2. Changes in flow on a downstream flowmeter can be used to establish the start time. Typically the daily flow peaks are "cut off" or flattened by the loss of flow. This can be identified by comparing hourly flow data during the spill event with flow data from prior days. This method will likely only be effective with consistent weather.
3. Conditions at the spill site change over time and can be used to establish the start time. Initially there will be limited deposits of toilet paper and other sewage solids. After a few days to a week, the sewage solids form a light-colored residue. After a few weeks to a month, the sewage solids turn dark. The quantity of toilet paper and other materials of sewage origin increase over time. These observations can be used to estimate the start time in the absence of other information. Taking photographs to document the observations can be helpful if questions arise later in the process. This method is valid for spills that have been occurring for a long time and may be used in conjunction with either of the above methods.
4. It is important to remember that spills may not be continuous. Blockages are not usually complete (some flow continues). In this case the spill would occur during the peak flow periods (typically 10:00 to 12:00 and 13:00 to 16:00 each day). Spills that occur due to peak flows in excess of capacity will occur only during, and for a short period after, heavy rainfall.

End Time: The end time is usually much easier to establish. Field crews on-site observe the "blow down" that occurs when the blockage has been removed. The "blow down" can also be observed in downstream flowmeters.

Flow Rate

The flowrate is the average flow that left the sewer system during the time of the spill.

There are three common ways to estimate the flowrate:

1. **The San Diego Manhole Flowrate Chart:** This chart, included as at the end of this appendix, shows sewage flowing from manhole covers at a variety of flowrates. The observations of the field crew can be used to select the appropriate flowrate from the chart. If possible, photographs are useful in documenting basis for the flowrate estimate.

2. **Flowmeter:** Changes in flows in downstream flowmeters can be used to estimate the flowrate during the spill.
3. **Counting Connections:** Once the location of the spill is known, the number of upstream connections can be determined from the sewer maps. Multiply the number of connections by 200 to 250 gallons per day per connection or 8 to 10 gallons per hour per connection.

   For example: 22 upstream connections * 9 gallons per hour per connection

   = 198 gallons per hour / 60 minutes per hour

   = 3.3 gallons per minute

Spill Volume

Once duration and flowrate have been estimated, the volume of the spill is the product of duration (hours or days) and the flowrate (gallons per hour or gallons per day).

For example:

Spill start time = 11:00

Spill end time = 14:00

Spill duration = 3 hours

3.3 gallons per minute x 3 hours x 60 minutes per hour

= 594 gallons

City of San Diego
Metropolitan Wastewater Department

Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

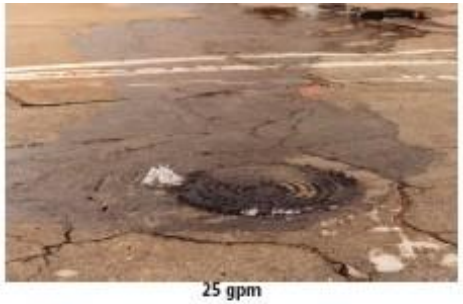
All I.J!tim.:ltl.Js are c /culated in gallons per minute (gpm)

W stewatQr Collection Division
(619)654-4160


5 gpm


100 gpm


225 gpm


25 gpm


150 gpm


250 gpm


50 gpm


200 gpm


275 gpm

All photO$*vme* tabn dJrlng a dtmcnstraU)n usng rretef'Ed watftcm a tr 1"dmt lncocpeuu:n \\tth *thee*ttyof Sal O1:90water D:partm:nt

Appendix 7 - Sewer Backup Summary Report

Appendix 7 - Sewer Backup Summary Report

District's Site Arrival Time: _____ Time Cleaning Contractor Called: _____

Section A

DATE: TIME: EMPLOYEE NAME:

RESIDENT: PROPERTY MANAGER(S):

STREET ADDRESS: STREET ADDRESS:

CITY, STATE AND ZIP: CITY, STATE AND ZIP:

PHONE: PHONE:

CAUSE OF FLOODING:

LOCATION/SEWER: □ STREET □ REAR EASEMENT □ MANHOLE # _____TO_____

□ MAINLINE □ SERVICE LINE □ DOUBLE-WYE

DAMAGE: □ BLACK WATER □ GREY WATER □ FRESH WATER

OF PEOPLE LIVING AT RESIDENCE:

Comments:

CLEANING SERVICES: □ REQUESTED BY OWNER – WAIT FOR CLEANING CONTRACTOR TO ARRIVE

□ DECLINED BY OWNER

Section B

APPROXIMATE AGE OF HOME: _____# OF BATHROOMS:_____ # OF ROOMS AFFECTED: _____

APPROXIMATE AMOUNT OF SPILL: _____(GALLONS)

APPROXIMATE TIME SEWAGE HAS BEEN SITTING:_____(*HOURS/DAYS*)

NUMBER OF PICTURES TAKEN: _____ DIGITAL OR FILM? _____

DOES THE CUSTOMER HAVE A BACKFLOW PREVENTION DEVICE (BPD)? □ YES □ NO

IF YES, WAS THE BPD OPERATIONAL AT THE TIME OF THE OVERFLOW? □ YES □ NO

HAVE THERE BEEN ANY PREVIOUS SPILLS AT THIS LOCATION? □ YES □ NO □ UNKNOWN

TYPE OF FLOORING IN THE ROOM AFFECTED:

□ TILE CONDITION OF TILE AND SEAMS (CRACKING, VISIBLE OPEN SPACES, ETC.)

□ CARPET
□ WOOD CONDITION OF FLOORING AND JOINTS (CRACKING, VISIBLE OPEN SPACES, ETC.)

□ OTHER PLEASE IDENTIFY:

HAS THE RESIDENT HAD ANY PLUMBING WORK DONE RECENTLY? □ YES □ NO □ UNKNOWN

IF YES, PLEASE DESCRIBE:

ARE THERE BASEBOARDS: □ YES □ NO BASEBOARD MATERIAL: _____

CONDITION OF BASEBOARDS:

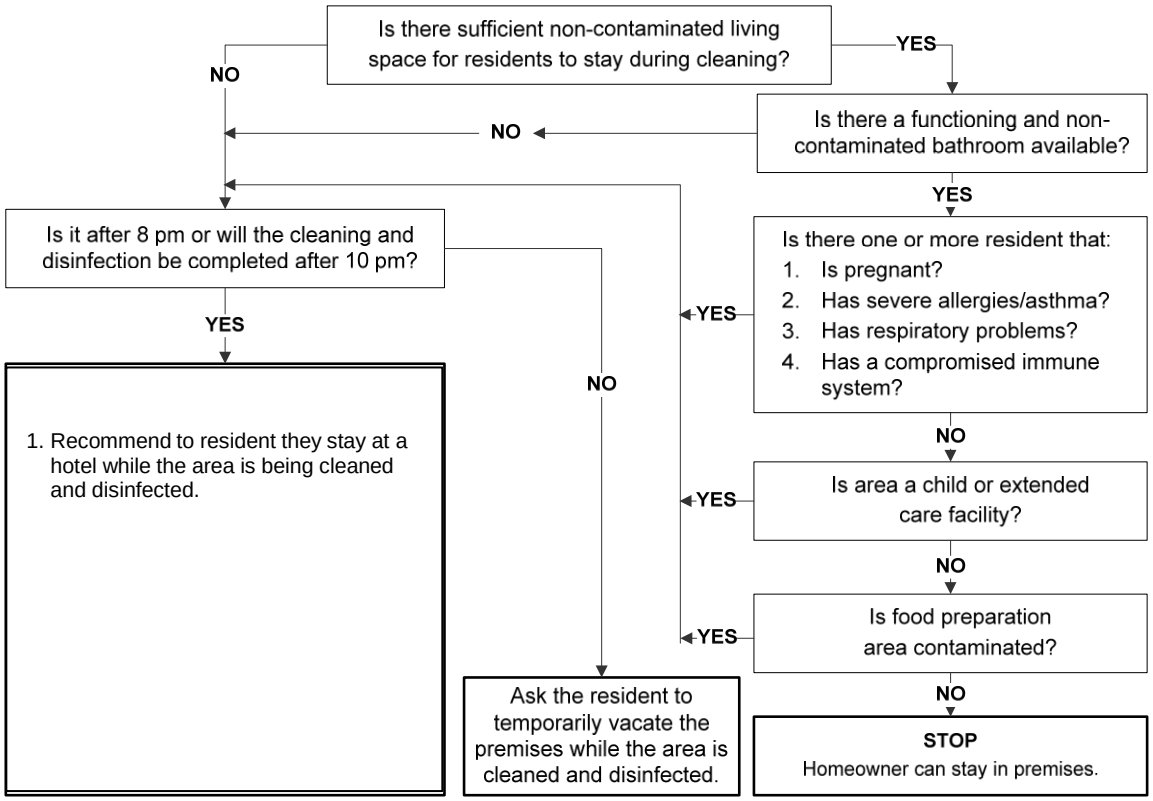
□ BASEBOARD BOTTOM HAS TIGHT SEAL WITH WALL

□ BASEBOARD TOP HAS TIGHT SEAL WITH WALL

□ BASEBOARD HAS SPACE BETWEEN BOTTOM & FLOOR

□ BASEBOARD HAS SPACE BETWEEN BASEBOARD & WALL

SECTION C: LIVABILITY ASSESSMENT



PLEASE DIAGRAM THE ROOMS AFFECTED (SHADE THE AREAS MOST HEAVILY)

SECTION D: CLEANING CONTRACTOR

COMPANY NAME: PHONE: ARRIVAL TIME:

COMMENTS:

Appendix 8 - Collection System Failure Analysis Form

Appendix 8 – Collection System Failure Analysis Form

CIWQS Event ID:		Prepared By:	
SSO/Backup Information			
Event Date/Time:	Address:		
Volume Spilled:	Volume Recovered:		
Cause:			
Summary of Historical SSOs / Backups / Service Calls / Other Problems			
Date	**Cause**	**Date Last Cleaned**	**Crew**
Records Reviewed By:		Record Review Date:	
Summary of CCTV Information			
CCTV Inspection Date:		Tape Name/Number:	
CCTV Tape Reviewed By:		CCTV Review Date:	
Observations:			
Recommendations			
	No Changes or Repairs Required		
	Maintenance Equipment		
	Maintenance Frequency		
	Repair (Location and Type)		
	Add to Capital Improvement Rehabilitation/Replacement List: Yes No		
Maintenance Manager: Review Date:			
Operational Services Director: Review Date:			

Appendix 9 - Equipment Inventory

Appendix 9 – Equipment Inventory

Roto-Rooter Inventory

Major Response Equipment

Combination hydroflusher/vacuum unit – 5-yard, 1000 gallon water tank

Combination hydroflusher/vacuum unit – 9-yard, 1000 gallon water tank

Rodding units – 1,500’ of 3/8” rod

CCTV Vans

Tractor driven CCTV cameras

Push cameras

Pump Truck – 2,500 gallons

Portable hydroflushing equipment – 16 hp, can clean up to 6” pipe

Portable rodder w/ 11/16” rod, 165’ cable capable of cleaning up to and including 6” pipe

Trailer

Bypass Equipment

2” Pump – Hydromatic with cam-lock connection

2”, 3”, and 4” cam-lock hoses (12 pieces of 25’ hose each, total 300’)

Fire hoses – 200’ of 3” hose (screw-on connection)

Containment Equipment

Containment rings for immediately around manhole

3’ x 5’ mats

3 mil and 5 mil Vizquin (thick plastic)

Plugs for all standard pipe sizes between 1.5” to 24”

Sand bags

Repair Equipment

Repair trucks for emergency repairs

Hitachi TB-25 for excavation, can dig to 7 feet

Cut-Off Saws – Gas-powered with 14” wheel

Air compressors

Locating equipment

600’ heavy duty, can locate to 30 feet

300’ regular duty

MH & castings, lids, and rings

Rod Hole castings, lids

Pipe

6” to 24” C-900 pipe

6” to 24” SDR 17 pipe

8” to 10” VCP pipe

Plates for covering trenches
Shoring
Dump truck

Confined Space Equipment
Gas detectors
Tripod
Harnesses
Blowers
Cable and winch

Washdown equipment
Camel machine has 500’ of hose
Camel has 100 feet of auxiliary hose
Spray nozzles
Pressure washer

Traffic Control Equipment
Cones
Signs
Road Work Ahead
Flagger Ahead
Arrows for Cones

Miscellaneous Tools and Equipment
Shovels
Couplers
Rakes
Brooms
Star Drill
Ladders
Sump Pumps
Hammer
Chisel
Screwdrivers
Manhole hook
50’ extension cords (2 per truck)
100’ extension cord (1 per truck)
Generators 2,500 watt

Appendix 10 - Residential Property Sewage Contamination Flyer

General Precautions for Sewage Contamination on Residential Property

If a sewer backup causes flooding in your home:

- Keep people and pets away from the affected area(s).
- Do not attempt to clean it yourself.
- Turn off central heat and air-conditioning systems and prevent flow from reaching floor vents by using towels or blankets as a berm. You can also remove the vent cover and stuff a towel in the opening to help prevent the flow from entering.
- Leave items in the affected area for the experts to handle.

Homeowner responsibilities

The homeowner is responsible for clearing any blockage in the home's plumbing system or private lateral and for any resulting flood damage to the structure. The homeowner is also responsible for damage that happens because a lateral was not properly installed. If the sewage flooding was caused by blockage in your private lateral:

- Call an experienced restoration company for cleanup and removal of affected surfaces.[1]
- Report a claim to your homeowner's insurance carrier.
- If you had recent plumbing work, contact your plumber or contractor.

If the sewage flooding was caused by a blockage in the public sewer main, the agency may be responsible for the damage. If you have a claim, file your claim as soon as possible. And the agency and/or insurance carrier will arrange for a restoration company.

Note: This information is provided to assist residents who experience an overflow of sewage on their property. It is not inclusive of events involving severe flooding, which can cause additional structural damage.

To report a sewage spill, contact SASM at (415) 388-2402.

1. See "Water Damage Restoration" section of the Yellow Pages for a list of restoration contractors.

APPENDIX B

District and SASM Ordinances

HOMESTEAD VALLEY SANITARY DISTRICT OF MARIN COUNTY (H.V.S.D.)

ORDINANCE NO:15
(NEW SERIES)

AN ORDINANCE REPEALING PRIOR ORDINANCES. ESTABLISHING GENERAL REGULATIONS FOR THE DISPOSAL OF SEWAGE, THE CONSTRUCTION AND USAGE OF SEWAGE FACILITIES. ESTABLISHING FEES AND RULES FOR CONNECTING TO THE DISTRICT SEWER SYSTEM. DECLARING VIOLATIONS HEREOF TO BE PUBLIC NUISANCES AND PROVIDING FOR ABATEMENT OF SAID NUISANCES AND DECLARING ANY VIOLATION THEREOF TO BE A MISDEMEANOR.

INDEX

THE GOVERNING BOARD OF HOMESTEAD VALLEY SANITARY DISTRICT DOES ORDAIN AS FOLLOWS:

ARTICLE I

All Ordinances heretofore adopted by this District, except Ordinances No. 10 and No. 11 (New Series), be and the same are hereby repealed.

ARTICLE II

Definitions

Unless otherwise clearly indicated by the context, the terms used herein shall have the following meaning:

Section 2.1: Applicant: The person making application for a permit in the capacity of owner or authorized agent of the owner of the premises for which a permit is requested.

Section 2.2: Board: The Governing Board of Homestead Valley Sanitary District.

Section 2.3: Bond: A cash deposit or duly executed performance bond (issued by a State licensed insurance company), the form of which is approved by the Board.

Section 2.4: Building: Any structure used for human habitation or within which any sewage is or may be produced.

Section 2.5: Connection Fee: The charge imposed by District for connection of private sewer directly or indirectly to District sewer.

Section 2.6: County: County of Marin, State of California.

Section 2.7: District: Homestead Valley Sanitary District.

Section 2.8: District Sewers: All lines, pipes and sewerage facilities owned by District.

Section 2.9: Easement: A duly recorded right of way owned by District for the maintenance, operation, repair, construction and reconstruction of District sewers.

Section 2.10: Fixture: Outlets, roughed in plumbing for washbowl, water closet, bathtub, separate shower, laundry tub, open drain, laundry drain or any opening to the disposal collecting system of a premise for the entry of sewage excepting swimming pools and wading pool drains.

Section 2.11: Inspection Fee: A charge imposed by District to defray the cost to District of inspecting premise, private sewer or public sewer.

Section 2.12: Inspector: Any person designated by the Board.

Section 2.13: Minimum Depth: The smallest permissible vertical distance from the highest point on any sewer pipe as laid to the final grade.

Section 2.14: Minimum Gradient: Minimum rate of decline along sewer lines as laid.

Section 2.15: Permit: Written authorization issued by the Board or its designee.

Section 2.16: Person: Any human being, individual, firm, company, partnership, association, corporation (private, public or municipal), United States of America, the State of California and all districts, political subdivisions, governmental agencies and subsidiaries thereof.

Section 2.17: Plans: Plans and specifications prepared and certified by a duly licensed civil engineer.

Section 2.18: Premise: Any lot, place or parcel or real property, improved or unimproved, within the territorial limits of the District that is (a) held in common ownership, (b) designated by the planning commission having jurisdiction thereof as a single parcel or portion thereof, and (c) not proposed to be subdivided.

Section 2.19: Primary Building: A single dwelling house, store, business house, establishment or rental unit with plumbing facilities, or other construction as determined by Board.

Section 2.20: Private Sewer: A lateral sewer connecting one premise to a District sewer.

Section 2.21: Secretary: Secretary of the Board and manager of the District, appointed by the Board.

Section 2.22: Street: Any public highway, road, street, avenue, alley way, public place, public easement or a right of way for motor vehicles.

ARTICLE III

Sewage Facilities

Section 3.1: Every premise in the District upon which a building exists or is hereafter erected shall be connected by a separate private sewer, of a minimum size of 4 inches interior diameter, to the District's sewer system except:

a. Buildings which are situated upon premises all of which are located more than 400 feet (measured in the horizontal plane) from the nearest District sewer.

b. Buildings which are situated upon property not adjoining the sewer if the Board has determined that a right-of-way for connection cannot be obtained.

Section 3.2: Private sewers for primary buildings or serving a building or a group of buildings located on one premise and having a total of not more than 180 fixture units, as per the 1973 Uniform Plumbing Code, in the

aggregate, may be constructed of a pipe having a nominal interior diameter of 4 inches, provided a minimum slope of 2% is obtainable.

Section 3.3: Private sewers for other buildings shall be constructed of pipe having a nominal interior diameter of not less than 6 inches, unless the Board has granted a variance to this requirement in accordance with the standards hereinafer set forth, in which case the nominal interior diameter of said private sewer shall be 4 inches, provided a minimum slope of 2% is obtainable. The Board may grant a variance to permit a 4 inch private sewer provided that a request is received for such variance and the Board makes affirmative findings to each of the following facts:

a. The premise is more than 400 feet horizontally distant from the nearest property line to the nearest point on the District sewer.

b. There is at the date of the application for the variance a 4 inch lateral installed and available for use by said premise and the said 4 inch lateral or private sewer was not constructed or installed at the request, authorization, or behest of the applicant.

c. There shall be no more than three (3) buildings allowed on one 4" line under this variance.

Section 3.4: Grant of variance to separate private sewers must be accompanied by a properly made out and recorded Maintenance Agreement entered into by the owners of the premises involved and filed with the District.

Section 3.5: Every premise required to be connected to the District sewer system shall complete said connection within sixty days after the effective date of this Ordinance or prior to occupancy (whichever shall last occur).

Section 3.6: Every premise in this District upon which a building exists or is hereafter erected that is not required to connect to the District sewers by virtue of one of the exceptions set forth in Section 3.1 above shall provide alternate sewage facilities approved by permit by the Board. Except as to septic tanks heretofore installed and approved by the Marin County Health Department, every premise shall complete said approved sewerage facility within sixty days after effective date of this Ordinance or prior to occupancy (whichever event shall last occur).

Section 3.7: Any premise within the Homestead Valley watershed but

outside the District boundaries may be connected to the District sewers upon such conditions as may be determined by the Board.

Section 3.8: Private sewers, four and six inch, must be maintained, repaired and replaced by the owners of the premises they serve.

Section 3.9: Any request for variance to this Ordinance or Standards must be made to the Secretary in writing.

ARTICLE IV

Permits

Section 4.1: No person shall connect or reconnect any fixture or drain directly or indirectly to the District sewers or cause any fixture or drain to be connected or reconnected without a permit.

Said person shall apply to the Secretary for a permit for such connection and shall provide such information as the Board may require, such as plans and topography maps. Simultaneously with filing of an application a fee of $15.00 for inspection shall be paid and a connection fee computed as follows:

a. Each primary building having no more than two rooms in which fixtures are to be included, $500 for the first 11 fixture units as per the 1973 Uniform Plumbing Code and $20 for each additional fixture unit.

b. Each additional room in which additional fixtures are to be provided, $20 for each fixture unit as per the 1973 Uniform Plumbing Code.

c. Reconstruction to utilize existing connections to District sewers and not including any increase in plumbing fixtures, after approval of existing line and connection by the Inspector, shall not require any fee in addition to the $15 inspection fee.

Section 4.2: All construction pursuant to Section 4.1 hereof shall comply with requirements of this Ordinance and must be approved by the Inspector in writing prior to backfilling.

Section 4.3: The Secretary may require the applicant to post a bond in an amount to be approved by the Board and to comply with all County ordinances, State and Federal statutes.

Section 4.4: The alteration, remodeling or relocation of all sewer lines, public or private, must be reported to the District.

Section 4.5: No person shall construct or cause to be constructed any sewage facilities not connected to the District sewers without a permit.

A permit for such purpose may be obtained from the Secretary after providing information required. As a condition to the receipt of such permit, applicant shall show evidence to the Secretary that the statutes, ordinances and regulations of the State of California and the County of Marin have been complied with. The applicant shall obtain written approval of the facility as constructed prior to use from the County Health Department. If all requirements hereunder are met, applicant shall obtain from the Secretary a written permit for said facility which shall expire sixty days after premises become subject to Section 3.1 hereof.

Section 4.6: No person shall construct or cause to be constructed any sewer line, other than a private sewer serving or to serve one premise, except as provided herein:

a. The applicant shall apply to the Secretary for a permit for said construction providing said Secretary with such information as may be required.

b. At the time of application for such permit, the applicant shall post a bond in an amount determined by the Board.

c. Prior to construction, where necessary, the applicant shall offer to the District, after a preliminary title report, a duly recorded easement of a size and location determined by the Board.

d. The construction undertaken pursuant to the permit shall comply with the requirements of this Ordinance and any conditions imposed in the permit and must be approved by the Inspector in writing prior to connection and backfilling.

e. A condition of the permit hereunder shall be that the applicant shall maintain such construction for a period of one year from completion or until accepted by the District, whichever event is later, and to post a penal bond in an amount established by the Board to assure compliance with said condition.

f. All permits required from the County of Marin, the State and Federal governments shall be obtained by the applicant.

g. Applicant shall pay the sum of $15 for an inspection fee in addition to all inspection and connection fees applicable to private sewers.

ARTICLE V

Construction

Materials, specifications and design shall conform to the District's standards of construction attached hereto and by this reference incorporated herein. Copies of such standards shall be available for examination in the office of the Secretary at all times.

ARTICLE VI

Sewer Accesses

Section 6.1: District manholes, lampholes, rodholes and/or their covers shall not be covered by paving, resurfacing, regrading or other work.

Section 6.2: Any necessary change or resetting of said castings shall be undertaken by duly licensed plumbers, sewer contractors or paving contractors at their sole expense under the supervision and inspection of the Inspector.

Section 6.3: No person shall place or cause to be placed any dirt, debris or other objectionable material into the sewers maintained by the District. The sewers shall be left clear and in working order.

Section 6.4: It shall be unlawful for any person to erect or cause to be erected any structure over District easements or to dump any debris into said easements.

ARTICLE VII

Unused Laterals

Section 7.1: The owner of any property upon which there was a structure connected to a District sewer main by a lateral shall close and stub off said lateral in a manner and at a place approved by the District Board within 30 days of receipt of written notice from the District Board. Said notice shall be sent whenever any said property becomes unused due to fire, obsolescence or any other cause.

Section 7.2: If the owner fails to close and stub off said lateral within the time limit prescribed, the District shall proceed to do so. In such event, the District shall charge the owner and the owner shall owe the District the reasonable value of such services.

Section 7.3: Any closed or stubbed off lateral may be used for reconnection to the District mains at the discretion of the District Board. No charge for connection shall be made, other than inspection fees, provided the reconnection is effected within two years after cessation of use and provided there is no increase in plumbing fixtures.

ARTICLE VIII

Use of District Facilities

Section 8.1: No solid or liquid wastes other than domestic and sanitary sewage originating within the District shall be discharged directly or indirectly into the District sewers without the permission of the Board.

Section 8.2: No leaders from roofs and no surface drains for rainwater shall be connected to any sanitary sewer. No surface or subsurface drainage, rainwater, stormwater, seepage, pooling water or unpolluted industrial process waters shall be permitted to enter any part of the public sewer system by any device or method whatsoever.

Section 8.3: Except as hereafter provided, no person shall discharge or cause to be discharged any of the following described waters or wastes into any public sewer:

a. Any liquid or vapor having a temperature higher than 150° Fahrenheit.

b. Any water or waste which contains more than 100 parts per million by weight of fat, oil or grease.

c. Any gasoline, benzine, naptha or fuel oil or other inflammable or explosive liquids, solids or gas.

d. Any garbage that has not been shredded to such a degree that all particles will be carried freely into the flow conditions normally prevailing in public sewers with no particle greater than 1/2 inch in dimension.

e. Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastic, wood, ranch manure or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewage works.

f. Any waters or waste having a pH lower than 5.5 or higher than 9.0 or having any other corrosive property capable of causing damage or hazard

to structures, equipment and personnel of the sewage works.

g. Any waters or waste containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment plant constituting a hazard to humans or animals or creating a hazard in the receiving waters of the sewage treatment plant.

h. Any waters or waste containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the sewage treatment plant.

i. Any noxious or malodorous gas or substance capable of creating a public nuisance.

j. Any septic tank sludge.

ARTICLE IX

Enforcement and Penalties

Section 9.1: Officers and employees of the District are hereby authorized to enter upon private property and inspect laterals for violation of this ordinance.

Section 9.2: In addition to such other penalties as may be provided by law, any person who violates or causes to be violated the provisions of this ordinance is guilty of a misdemeanor punishable by fine not to exceed $100, imprisonment not to exceed one month, or both such fine and imprisonment. Each and every violation of this ordinance shall be deemed a separate violation and each and every day or part of a day a violation of the ordinance, rule or regulation such continues shall be deemed a separate offense hereunder and shall be punishable as such.

Section 9.3: Violation of any provision of this ordinance is hereby declared to constitute a public nuisance.

Section 9.4: Abatement of said nuisance may be undertaken by recourse to the Court of competent jurisdiction at the direction of the Board or as herein provided:

a. Written notice of appearance shall be given to the property owner or owners at least ten days prior to the date set for hearing before the Board on the question of whether a nuisance exists. Service of the notice may be given either by personal delivery thereof to the person to be notified or by

deposit in the United States mail in a sealed envelope, postage prepaid, addressed to such person to be notified at his last known business or residence address as the same appears in the public records or other records pertaining to the matters in which such notice is directed. Service by mail shall be deemed to have been completed at the time of deposit in the Post Office. A copy of the notice shall be conspicuously posted in front of the property on which the nuisance exists or is alleged to exist or any other location on the property where it will most likely give notice to the owner or owners at least ten days prior to the date set for hearing. Said notice shall direct the owner or owners of the property on which the nuisance exists to appear before the Board at a stated time and place to show cause why the nuisance should not be abated as provided in this chapter.

b. The notice shall be substantially in the following form:

ORDER TO SHOW CAUSE
RE ABATEMENT OF PUBLIC NUISANCE

TO:

You are hereby notified to appear before the Board of Directors of the Homestead Valley Sanitary District on the _____day of_____, 19 , at _____at the hour of _____o'clock, M., or as soon thereafter as the matter may be heard and show cause, if any you have, why that certain_____should not be condemned as a public nuisance, and said nuisance be abated by its repair or removal and why its repair or_____and why the cost of such abatement should not be assessed upon the property from which the nuisance is abated, such cost to constitute lien upon said property until paid.

Dated this _____day of _____, 19____.

_____
District Secretary

c. At the time stated in the notice the Board of Directors shall hear and consider all objections or protests, if any, to the proposed abatement of the public nuisance. The hearing may be continued from time to time. After final action is taken by the Board of Directors on the disposition of any protest or objections which are received, the Board may declare by resolution that a public nuisance exists and may order the

Secretary to abate the nuisance. The Board may further order that the cost of any such abatement will be assessed upon the property from which the nuisance is abated and that such costs shall constitute a lien upon such property until paid.

The decision of the Board of Directors shall be final and conclusive unless the owner or owners shall file within 15 days after the aforesaid decision is rendered an action and/or appeal to a court of competent jurisdiction.

d. At any time within 30 days after the passage of any resolution directing the abatement of a nuisance, the Secretary shall serve and post a copy thereof in a manner giving notice prescribed in subsection a. hereof.

At any time following a period of 15 days after serving and posting a copy of the resolution ordering abatement as required above, the District Secretary may abate such nuisance as directed by the Board.

e. The Secretary may direct any officer or his assistant, deputy, employee, contracting agent or any other representative to enter upon private property for the purpose of abating the public nuisance.

f. The Secretary abating the nuisance shall keep an account of the cost of abatement and shall render an itemized report to the Board showing them the cost of removing and/or abating the nuisance.

Before the report is submitted to the Board, a copy shall be posted for at least 3 days on or near the door of the Board's chambers with the notice and the time when the report will be submitted to the Board for confirmation. A copy of the account and notice shall also be mailed to the owner of the property at the address shown on the last equalized assessment roll at least ten days prior to submission to the Board.

At the time fixed for receiving and considering the report, the Board shall hear it and any objections by the property owners liable to be assessed for the work of abatement. Thereupon, the Board may make such modifications in the report as it deems necessary, after which, by order or resolution, the report shall be confirmed.

Section 9.5: The cost of such abatement as determined by the Board shall be levied as an assessment against the aforesaid property and certified to the County Auditor. Such special assessment shall be a lien on the property

and shall be collected as any other assessment by the County and paid to the District and all laws applicable to the levy, collection and enforcement of County taxes shall be applicable to such special assessment taxes.

ARTICLE X

Severability

If any section, subsection, paragraph, sentence, clause or phrase of this ordinance is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The Board hereby declares that it would have passed this ordinance and each section, subsection, paragraph, sentence, clause and phrase thereof irrespective of the fact that any one or more sections, subsections, paragraphs, sentences, clauses or other phrases be declared unconstitutional.

This ordinance shall be entered in the minutes of the Board. There being no newspaper published in the District, it is ordered that this ordinance to be posted by the Secretary for one week in the following public places within the District, as per District Resolution No. 22:

(1) Fire House, corner Melrose and Evergreen Avenues.

(2) Telephone Pole, corner Ethel and Evergreen Avenues.

(3) Telephone Pole, intersection Homestead Blvd and LaVerne Avenue.

THIS ORDINANCE SHALL TAKE EFFECT upon expiration of the week of posting.

PASSED AND ADOPTED by the Governing Board of the HOMESTEAD VALLEY SANITARY DISTRICT of Marin County, California, this 28th day of May, 1974, by the following vote:

AYES: MEMBERS: MacNichols, Davies, Schwarz, Spalding and Wolf

NOES: MEMBERS: None

ABSENT: MEMBERS: None

James G. MacNichols, President
Governing Board, H.V.S.D.

ATTEST:

Gus Wolf, Secretary
Governing Board, H.V.S.D.

References: Section 6491.1 Health & Safety Code, State of California
" 6521 " " " "
" 6523 " " " "
" 6523.3 " " " "
" 54739 Government Code "
" 54740 " " "

ORDINANCE NO. 2014 - 01

AN ORDINANCE REGULATING THE CONSTRUCTION, USE AND MAINTENANCE OF PRIVATE SEWER LATERALS

HOMESTEAD VALLEY SANITARY DISTRICT

THE DISTRICT BOARD OF DIRECTORS HEREBY ESTABLISHES THIS ORDINANCE TO REGULATE THE CONSTRUCTION, USE AND MAINTENANCE OF PRIVATE SEWER LATERALS AND TO OPERATE IN CONJUNCTION WITH EXISTING DISTRICT ORDINANCES

IN ORDER TO ENSURE THE PROPER CONSTRUCTION AND MAINTENANCE OF PRIVATE SEWER LATERALS WITHIN THE SANITARY DISTRICT (HEREINAFTER REFERRED TO AS "DISTRICT"), THE BOARD OF DIRECTORS DO HEREBY ORDAIN:

Sections:

Section 100: FINDINGS

The District finds and determines that Inflow and Infiltration (hereinafter referred to as I&I) is a serious problem for the District in that during heavy rains a significant amount of water is introduced into the District's system as a result of I & I from breaches in the entire pipeline system that leads to the SASM treatment facility. To a great extent, much of this I & I is introduced into the District's pipelines and sewer mains from the sewer laterals or unpermitted drainage structures leading from a property to the District's sewer mains. As a result of I & I, the Sewerage District of Southern Marin's (SASM's) sewer treatment facilities have the potential to become overburdened during periods of heavy rains leading to sewage overflows and possible spills into the waters of Richardson Bay. Such overflows and spills can lead not only to significant fines and penalties against the District by state and federal water regulatory agencies, but may pose a significant risk to the environment, and the health and safety of the public at large.

The District has determined that it is in the public interest to address I & I contributed by private sewer laterals and, as such, it is an District priority to authorize the enforcement of the upgrade and repair of private sewer laterals.

Section 150: DEFINITIONS

LATERAL SEWER, LATERAL or PRIVATE SEWER LATERAL is hereby defined as a privately owned sewer which conveys sewage from a building to the District's collection system, including all pipes, fittings, and appurtenances, from the outer face of the building served to the connection into the District's sewer main, including the connection itself.

INFLOW means any water other than sewage that is directed toward or connected to the District's collection system through drainage ditches, open or enclosed culverts, roof drains, yard or area drains, or any other source of storm or ground water.

INFILTRATION means water other than sewage which enters into the District's collection system through cracks, breaks, open joints, or other deficiencies which may exist in laterals or in the District's system.

INFLOW AND INFILTRATION are sometimes referred to collectively as "I and I".

COMMERCIAL BUILDING means any building, or portion thereof, designed, intended or used to accommodate a business, commercial, mixed commercial and residential or industrial enterprise, or a public or private school.

COMMON INTEREST DEVELOPMENT means a development characterized by individual ownership of a condominium housing unit or a residential parcel coupled with the shared ownership of (or right to use) common areas and facilities, including, but not limited to, condominium projects, community apartment projects, stock cooperatives and planned unit developments, which contains three (3) or more dwelling units and which has a sewer service lateral shared by three (3) or more dwelling units.

NOTICE TO REPAIR means the notice issued by the District Manager or District Engineer to the Owner advising that the Owner appears to be in violation of the respective Code or Ordinance with respect to the Owner's sewer service lateral, or in violation of the Code or Ordinance in a manner of the sewer service lateral's connection to the District Sewer System, which order directs the abatement of the identified violation in a timely manner.

OWNER means any person, partnership, association, corporation or fiduciary having legal title (or any partial interest) in any real property situated within the District.

REPAIR means restoration of the lateral in a manner that eliminates breaks, voids, separations, sags, or other defects that allow non-sewage materials, including but not limited to groundwater, roots, soils, and infiltration, to enter the lateral.

SEWER MAIN means a District owned pipeline designed and operated to accept sewage from a sewer service lateral for disposal.

SEWER SERVICE LATERAL INSPECTION means an inspection of a sewer service lateral that consists of the retention of a licensed plumber by the Owner in order to visually examine and inspect a sewer service lateral in the manner deemed appropriate by the District Manager or District Engineer. Such an inspection shall, at a minimum, include the use of a closed-circuit television inspection device for the purposes of determining whether the sewer service lateral complies with the requirements of this Chapter.

Section 200: NEW CONSTRUCTION SEWER LATERALS

All new residential, apartments, industrial and commercial buildings shall have installed a new sewer service lateral. A minimum four-inch lateral shall serve single or duplex residential dwelling units. A minimum six inch lateral shall be installed to serve buildings with three or more residential units, and industrial and commercial buildings. Construction shall conform to District standards.

Section 250: CONNECTION PERMITS

Prior to constructing a lateral or connecting a new building to an existing lateral, or undertaking a major repair of a lateral, the owner shall apply for and obtain a connection permit from the District.

The application shall include a plan showing the location of the lateral and the proposed repair or replacement, and all buildings, other utilities, significant features and topography of the property and showing the public right-of-way or easement in which the lateral and the District sewer are located, and the proposed connection of the lateral to the District's sewer.

Section 280: IMPROPER AND ILLEGAL CONNECTIONS TO PRIVATE SEWER LATERAL

It shall be improper and illegal for a Contractor or Homeowner to connect the following to a private sewer lateral: storm drains, roof drains, pool drains and/or non-sewage pipes or drains. Violation of this Section is punishable under Section 570.

Section 300: OWNERSHIP, MAINTENANCE AND REPAIR OF PRIVATE SEWER LATERALS

A. Private sewer laterals shall be owned, maintained and repaired by the owner of the property, which the lateral serves. The entire service lateral, from the building connection to and including the "wye" connection or other-tie-in to the sewer main, shall fall within the owner's responsibility for installation, maintenance and repair.

B. Property owners must clean, maintain and repair laterals serving their property sufficient to keep the lateral in operable condition at all times. The property owner shall perform such duties as may be required in response to observed overflows or seepage attributable to the lateral, or as discovered by smoke testing, televising or other surveys of the lateral. Where such maintenance requires excavation and/or replacement of existing facilities, the property owner shall apply for and receive a connection permit (see Section 250 above) from the District.

Where there are multiple connections to a sewer lateral, please refer to Section 450 A. for recommendations on sharing costs for maintenance.

Section 400: MANDATORY INSPECTIONS

A. HEALTH AND SAFETY BASIS FOR REQUIRING A SEWER SERVICE LATERAL INSPECTION. An Owner shall have the sewer service lateral of his or her real property inspected in accordance with the requirements of this Chapter (as directed and within the time period indicated by the District Manager or District Engineer) upon the occurrence of any of the following events:

1. **Overflow or Malfunction.** Whenever the District Manager or District Engineer determines that the sewer service lateral has recently overflowed or has recently malfunctioned;

2. **Lateral Failure or Lack of Maintenance**. Whenever the District Manager or District Engineer finds that there is sufficient evidence to conclude that the sewer service lateral has failed, is likely to fail, or has not been properly maintained.
3. **Public Health Threat**. Upon any other reasonable cause to believe that there is a threat to the public health, safety, or welfare due to the condition of a sewer service lateral.
4. **Age of pipes and/or extent of foliage causing higher flow within the service area.** Whenever the District Manager or District Engineer determines that the age of pipes (clay, plastic or other material) in combination with observed foliage (tree roots near the sewer lateral suggesting root intrusion causing infiltration) or the age of the pipes independently are causing a higher than average flow in a neighborhood or area, the District Manager or District Engineer may direct an inspection of the sewer service lateral to determine the need for repair.
5. This Section shall apply to residential properties, fixed and floating properties, commercial properties, publicly owned buildings, common interest developments, apartment buildings and any structure which has a sewer lateral.

B. EVENTS REQUIRING A SEWER SERVICE LATERAL INSPECTION – ALL PROPERTIES. An Owner shall have the sewer service lateral of his or her Property inspected in accordance with the requirements of this Chapter upon the occurrence of any of the following events:

1. **Additions and Improvements**. Prior to the issuance of a county or city building permit for a building addition or new improvements on the real property where said addition or improvements (or cumulative additions or improvements through multiple projects over the prior 3 years) have a value of $50,000 or greater.
   a. District shall notify the relevant jurisdiction (City or County) of this requirement so that Issuance of a building permit is conditioned upon meeting the requirement of a lateral inspection.
2. **Transfer of Property Title**. Where the sale of any real property with sewer improvements is proposed, the seller shall have the sewer service lateral inspected prior to transfer of property title.
   a. It is suggested that the seller provide an inspection report to the District Manager or District Engineer as specified in Section 420 of the sewer lateral upon offering the home for sale. **The responsibility for any repair of a lateral is an issue between the buyer and seller.**
   b. Should the seller fail to have an inspection conducted on the property prior to the sale of the property, the District shall require the new owner to conduct an inspection and make any necessary repairs to the lateral.
3. **Whenever the District is replacing a sewer main or conducting repair of a sewer main or the City or County is doing road resurfacing on or near the road where the private sewer lateral connects to the sewer main.** Owners will be notified by the District of the current work and need for an inspection report on their lateral prior to the

road work or construction so that any remedial work to the lateral is completed prior to the construction or road work.

Where an Owner refuses to provide an inspection, District may conduct a televised inspection and Owner shall be responsible for the costs of such inspection. Should an inspection reveal the need for repairs, the District may issue a Notice of Repair to the Owner and have the remedies provided for in Section 430 D. of this Ordinance to ensure repairs are made and costs are paid.

C. EXCEPTION TO INSPECTION FOR RECENT PRIOR INSPECTIONS AND REPAIRS. The following exceptions do not apply to any Inspection required under subparagraph A. above. Upon request and the submission of appropriate documentation, the District may, at its sole discretion, grant an exception to the Inspection requirements of subparagraph B. **above as indicated.**

Section 410: ACCESS TO PROPERTIES FOR SEWER LATERAL INSPECTIONS

Officers and employees of the District (or any designated representative thereof including the District Manager or District Engineer) are hereby authorized to enter upon private property and inspect laterals for violation of this and other District Ordinances. When possible the district will attempt to give advance notice to the property owner prior to inspecting sewer facilities. Typical circumstances requiring inspection of laterals include but are not limited to following purposes:

A. To determine the size, depth, and location of any sewer connection.

B. To determine the end outlet of any sewer connection by depositing harmless testing materials in any plumbing fixture attached hereto and flushing the same, if necessary.

C. To determine, by measurements and samples, the quantity and nature of the sewage or wastewater being discharged into any sewer or overflowing from any sewer.

D. To determine the location of the roof, swimming pool, floor and surface drains, and whether or not they physically connect to a sewer.

E. To assess the condition of the lateral where he/she suspects that the lateral may be allowing inflow or infiltration.

Nothing herein shall be deemed to provide the District Manager or District Engineer with any right or authority to enter a building or other apparently private or interior area of a real

property, except to the extent such entry is expressly authorized by state law or by consent or permission of the resident.

Section 420: SEWER LATERAL INSPECTION REPORT – REQUIREMENTS

A. INSPECTION REPORT STANDARDS. The sewer service lateral Inspection Report required by this Chapter shall be prepared in accordance with the following requirements and specifications.

1. The Inspection Report shall be prepared by a licensed plumber; the written inspection report shall be accompanied by a DVD of the sewer service lateral.

2. The Inspection Report shall identify all of the following:
   a. Any and all defects that could allow infiltration into the lateral or otherwise create a maintenance issue in the District sewer system. Such defects may include but not be limited to the following: displaced joints, open joints, root intrusion, substantial deterioration of the line, cracks, leaks, inflow or infiltration or extraneous water, root intrusion, grease and sediment deposits or other conditions likely to increase the chance for blockage of the sewer service.
   b. Whether any connection, by pipes or otherwise, allows rainwater to groundwater to enter the sewer service lateral or public sewer.
   c. Whether the sewer service lateral has an installed backwater device where any outlet or trap of the sewer service lateral is below the level of the nearest manhole. If a backwater device is already installed, the report shall indicate whether the backwater device is functioning properly.

3. The Inspection Report shall contain an express certification from the certified inspector that the property has been inspected for any outdoor drain connection to the District sewer system and that no such unpermitted Lateral exists. The Report shall be prepared in a format acceptable to the District.

4. Based upon the District staff evaluation of the deficiencies outlined in the Report, the District will determine the level of repair or replacement that is necessary.

B. COMPLIANCE WITH REGULATIONS. The Inspection Report shall, in all other aspects, comply with the requirements and specifications described in the District Manager or District Engineer's specification for a sewer service lateral Inspection Report as established in subsection 1, below.

1. Requirements for an Inspection Report: The following items are required to be addressed in an inspection report:
   a. Date of inspection;
   b. Name of inspector and name of plumbing firm along with license #;
   c. Certification that a televised video was taken of the lateral;
   d. A certification that no roof, swimming pool, floor and/or surface drains or any other non-sewage drains are physically connected to the lateral or sewer main;
   e. Identification with respect to the sewer lateral of any displaced joints, open joints, root intrusion, substantial deterioration of the line, cracks, leaks, inflow or infiltration or extraneous water, root intrusion, grease and sediment deposits or other conditions likely to increase the chance for blockage of the sewer service.
   f. Certification that an installed backwater device is in place where any outlet or trap of the sewer service lateral is below the level of the nearest manhole. If a backwater device is already installed, the report shall indicate whether the backwater device is functioning properly.
   g. A Declaration under penalty of perjury that the report is true and correct.

Section 430: SEWER LATERALS – REQUIRED REPAIRS

A. NOTICE TO REPAIR. Upon receipt of the sewer service lateral Inspection Report pursuant to this Chapter, the District Manager or District Engineer will determine whether it indicates any deficiencies in the operation of the sewer service lateral and, thereafter, shall provide the Owner(s) with a Notice to Repair as may be deemed appropriate by the Manager or District Engineer. The District Manager or District Engineer shall provide the determination and issue a Notice to Repair within 3 business days after receipt of the Inspection Report. The Notice to Repair/Replace shall specifically identify the deficiencies to be corrected and shall establish a deadline of 180 days, within which the Owner(s) shall complete the required corrective actions. The corrective action may include a requirement that the lateral be replaced altogether and also may include the installation of cleanouts and backwater valves if those devices are otherwise required by this Ordinance or any uniform code adopted by the District.

B. OBLIGATIONS OF THE OWNER. The Owner shall repair his or her sewer service lateral to the satisfaction of the District Manager or District Engineer, and, if a building permit is required for the repairs, the Owner shall obtain a final permit inspection and approval of the relevant Building Official.

C. REPAIRS TO IMPROPER CONNECTIONS CONSISTING OF MULTIPLE PRIVATE CONNECTIONS TO A COMMON LATERAL. A sewer service lateral serving more than one residential dwelling, except as provided for in Section 450 is an improper connection and shall be repaired or replaced as deemed appropriate by the District Manager or District Engineer. The Owner of each affected residential dwelling shall be responsible for

disconnecting their sewer service lateral from the common lateral and connecting to the nearest sewer main.

D. FAILURE TO REPAIR UPON DISTRICT NOTIFICATION: Should an Owner fail to conduct the required repairs upon issuance of a Notice to Repair by the District, the District shall have several options in order to ensure that the repair or replacement is completed:

1. **Public Nuisance:** Continued habitation of any home, building or continued operation of any industrial facility in violation of a Notice to Repair or Replace a private sewer lateral is hereby declared to be a Public Nuisance. The District may cause proceedings to be brought for the abatement of the occupancy of the home, building or industrial facility (i.e., a court order directing the occupant(s) to vacate the home, building or industrial facility until the directed repairs are made) during the period of such violation. The District shall have the right to recover its attorney fees and costs for the pursuit of the abatement.
2. **Disconnection of Private Sewer Lateral to Sewer Main:** The District shall have the right to commence proceedings in Marin Superior Court to seek a court order disconnecting the private sewer lateral from the sewer main, thus leaving the home, building or industrial facility without sewer service. The District shall have the right to recover its attorney fees and costs for the pursuit of disconnection.
3. **Corrections of Violations:** Section 6523 of the California Health and Safety Code provides that in order to enforce the provisions of any Ordinance of an District, the District may correct any violation of an Ordinance of the District. The cost of such correction may be added to any sewer service charge payable by the person violating the Ordinance or the owner or tenant of the property upon which the violation occurred, and/or the District may place a lien on the property wherein the violation occurred or the District may pursue a civil action for recovery of the costs. Whatever option the District pursues under this subsection 3. the District shall be entitled to its costs and attorney fees.

Section 440: COMMON INTEREST DEVELOPMENTS

The Homeowners association of a Common Interest Development shall, along with the Owner, be jointly and severally liable for the duties and obligations imposed by this Chapter in relation to any sewer service lateral located within a common area of the Development. If no homeowners association exists, then the individual unit owners, considered jointly, shall be liable for the duties and obligations with respect to sewer service laterals established by this Chapter.

Section 450: PRIVATE SEWER LATERALS – MULTIPLE CONNECTIONS

It shall be the policy of the District to require one private sewer lateral serving one single family home. However, the District is cognizant that the sewer service system within the District is very old and contains many hillside single-family homes that are serviced by one private sewer lateral (e.g., one private sewer lateral for two or more homes). Where no apparent deficiency exists with a shared service lateral, the District shall allow the multiple service lateral. Where repairs are necessary, the owners of the residences served by the lateral shall jointly be responsible for the repairs. Where repairs and/or replacement of such a lateral is necessary, the District may require the construction of a new private service lateral for each residential single family home or the construction of a new larger private service lateral to accommodate the multiple residences.

Where multiple residential connections are allowed to one private sewer lateral, the District encourages the homeowners to enter into a maintenance agreement between all of the homeowners sharing the private lateral to ensure that there is a mechanism in place to pay for required repairs and/or replacement of the private sewer lateral. In general terms, a common method is to proportion the costs of the maintenance, repair or replacement among the homeowners sharing the lateral. For example, homeowners upstream of the shared-lateral section requiring rehabilitation would proportion their costs relative to the length of the shared lateral which serves their home divided by the length of the entire shared lateral from the sewer main upstream to the point of the repair. The relative percentage may vary along the pipe depending on the number of connections upstream of the repair.

Section 500: PROHIBITED DISCHARGES

A. No person shall discharge or deposit, or cause or allow to be discharged or deposited into the District sewer system any wastewater which contains any of the following:

1. Cooking grease whether emulsified or not.
2. Waste automotive radiator coolant
3. Explosive mixtures
4. Radioactive wastes
5. Solid or viscous wastes which may cause obstruction to the flow in a sewer pipeline, including cleansing wipes or "flushable" wipes.
6. Any toxic substances in excess of the United States Environmental Protection District standards pursuant to Section 307 (a) of the Clean Water Act, or any other substances which may interfere with the biological processes of the wastewater system.
7. Petroleum products of any kind.

Section 550: PUNISHMENT FOR VIOLATION OF PROHIBITED DISCHARGES

A. Misdemeanor: Section 6523 of the California Health and Safety Code provides that the violation of any ordinance, rule or regulation of a sanitary district by any person is a misdemeanor punishable by imprisonment in the county jail not to exceed 30 days or by a fine not to exceed one thousand dollars ($1,000) or both. Each and every connection, occupancy, prohibited discharge in violation of this Ordinance shall be deemed a separate violation and each and every day or part of a day a violation of the Ordinance, rule or 426 regulation continues shall be deemed a separate offense hereunder and shall be punishable as such.

Section 560: DAMAGE TO DISTRICT SEWER SYSTEM

It is unlawful for any person to maliciously, willfully, or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment that is part of the District 434 Sewer System. Any violation of this Section shall be punishable under Section 550 (above) and any 435 violation may constitute other crimes under the California Penal Code or the United States Codes.

Section 570: PUNISHMENT – CONTRACTORS – VIOLATION OF SECTION 280

Should a Contractor make any connections in violation of Section 280 of this Ordinance, the Contractor shall be guilty of a misdemeanor within the meaning of Section 6523 of the California Health and Safety Code and shall be punished in accordance with the provisions of Section 550 of this Ordinance. Additionally, the District shall report such a Contractor to the State Licensing Board.

Section 600: SEVERABILITY

If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be unconstitutional and invalid, such decision shall not affect the validity of the remaining portion of this ordinance. The Board of Directors hereby declares that it would have passed this ordinance and every section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared unconstitutional or invalid.

Section 650: EFFECTIVE DATE OF ORDINANCE

This Ordinance shall be and the same is hereby declared to be in full force and effect from and after thirty (30) days after the date of its passage and shall be published once before the expiration of fifteen (15) days after said passage, with the names of the Directors voting for or against the same, in the Marin Independent Journal, a newspaper of general circulation published in the County of Marin, State of California.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of the Homestead Valley Sanitary District, held on the 23 day of Sept.; 2014 by the following vote:

AYES 3 Cronin, Leibof and Tregoning

NOES 0 None

ABSENT: 2 Asbo, Noble

_____ President, Board of Directors

ATTEST:

Barrett Tregoning Secretary

ORDINANCE NO. 83-1

AN ORDINANCE ADOPTING AND ESTABLISHING WASTEWATER DISCHARGE REQUIREMENTS FOR THE USERS OF THE SANITARY SEWERAGE FACILITIES OF THE SEWERAGE AGENCY OF SOUTHERN MARIN

The Board of Commissioners of the Sewerage Agency of Southern Marin, a joint powers agency, Marin County, California, does ordain as follows:

ARTICLE I

GENERAL PROVISIONS

SECTION 1.01 Purpose and Policy. This Wastewater Discharge Ordinance sets uniform requirements for discharges into the wastewater collection and treatment system and enables SASM to comply with the administrative provisions of the Clean Water Grant Regulations, the water quality requirements set by the Regional Water Quality Control Board and the applicable effluent limitations, national standards of performance, toxic and pretreatment effluent standards, and any other discharge criteria which are required or authorized by State or Federal law, and to derive the maximum public benefit by regulating the quality and quantity of wastewater discharged into the sewer system tributaries to a SASM treatment works. This Ordinance provides a means for determining constituents and characteristics, and the issuance of permits to certain users.

SECTION 1.02 Definitions. Unless otherwise defined herein, terms shall be as adopted in the latest edition of Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association, and the Water Pollution Control Federation. Waste constituents and characteristics shall be measured by Standard Methods unless expressly stated, or as established by Federal or State regulatory agencies.

(a) "Agency" - Any public entity which is a member of SASM, including: the Almonte Sanitary District, the Alto Sanitary District, The City of Mill Valley, the Homestead Valley Sanitary District, the Richardson Bay Sanitary District, or the Tamalpais Community Services District.

(b) "Building Sewer" - A sewer conveying wastewater from the premises of a user to a community sewer.

(c) "Beneficial Uses" - Uses of the waters of the State that may be protected against quality degradation including domestic, municipal, agricultural and industrial supply, power generation, recreation, aesthetic enjoyment, navigation and the preservation and enhancement of fish, wildlife, and other aquatic resources or reserves, and other uses, both tangible or intangible as specified by Federal or State law.

(d) "Community Sewer" - A sewer owned and operated by an Agency tributary to a treatment works operated by SASM.

(e) "Compatible Pollutant" - Biochemical oxygen demand, suspended solids, pH and fecal coliform bacteria, plus additional pollutants identified in SASM's National Pollutant Discharge Elimination System (NPDES) Permit if SASM's treatment works was designed to treat such pollutants, and in fact does remove such pollutants to a substantial degree.

(f) "Contamination" - An impairment of the quality of the waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. Contamination shall include any equivalent effect resulting from the disposal of wastewater, whether or not Waters of the State are affected.

(g) "Federal Act" - The Federal Water Pollution Control Act, PL 92-500, and any amendments thereto; as well as any guidelines, limitations, and standards promulgated by the Environmental Protection Agency pursuant to the Act.

(h) "Holding Tank Waste" - Any waste from holding tanks such as vessels, chemical toilets, campers, trailers, septic tanks, and vacuum pump tank trucks.

(i) "Incompatible Pollutant" - Any pollutant which is not a "compatible pollutant" as defined in this Section.

(j) "Major Contributing Industry" - Any wastewater contributor identified in the Standard Industrial Classification (SIC) Manual in any of Divisions A, B, D, E and I that: (1) has a discharge flow of 50,000 gallons or more per average work day (if seasonal, the average shall be computed on the period of use), or (2) has a flow or polluant loading greater than five per cent of the design capacity of SASM's treatment works, or (3) has in its wastes toxic pollutants in toxic amounts as defined in the standards issued under Section 307(a) of the Federal Water Pollution Control Act Amendments of 1972, or (4) is found by an Agency's or SASM's authorized representative to have significant impact, either singly or in combination with other contributing industries, on the treatment works or upon the quality of effluent from the treatment works.

(k) "Manager" - The manager of SASM or his designated representative.

(l) "Mass Emission Rate" - The weight of material discharged to the community sewer system during a given time interval. Unless otherwise specified, the mass emission rate shall mean pounds per day of a particular constituent or combination of constituents.

(m) "Person" - Any individual, firm, company, partnership, association, and private, public and municipal corporations responsible corporate officer, the United States of America, the State of California, districts and all political subdivisions, governmental agencies and mandatories thereof.

(n) "Pollution" - An alteration of the quality of the Waters of the State by waste to a degree which unreasonably affects such waters for beneficial use or affects the facilities which serve such beneficial uses. Pollution may include contamination.

(o) "Premises" - A parcel of real estate or portion thereof including any improvements thereon which is determined by an Agency or SASM to be a single user for purposes of receiving, using, and paying for service.

(p) "Reclaimed Water" - Water which, as a result of treatment of waste, is suitable for direct beneficial use or a controlled use that would not otherwise occur.

(q) "SASM" - The Sewerage Agency of Southern Marin.

(r) "Treatment Works" - Any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature or necessary to recycle or reuse water at the most economical cost over the useful life of the works, including intercepter sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment and appurtenances; extensions, improvements, remodeling, additions and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment; or any other method or system for preventing, abating, reducing, storing, treating, separating

or disposing of municipal waste, including storm water run-off, or industrial waste, including waste in combined storm water and sanitary sewer systems.

(s) "Unpolluted Water" - Water to which no constituent has been added, either intentionally or accidentally, which would render such water unacceptable to the Agency having jurisdiction thereof for disposal to storm or natural drainages or directly to surface waters.

(t) "User" - Any person that discharges, causes or permits the discharge of wastewater into a community sewer.

(u) "User Classification" - A classification of user based on the 1972 edition fo the Standard Industrial Classification (SIC) Manual prepared by the Executive Office of Management and Budget.

(v) "Waste" - Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature, including such waste placed within containers of whatever nature prior to, and for purposes of, disposal.

(w) "Wastewater" - Waste and water, whether treated or untreated, discharged into or permitted to enter a community sewer.

(x) "Wastewater Constituents and Characteristics" - The individual chemical, physical, bacteriological and radiological parameters, including volume and flow rate and such other parameters that serve to define, classify or measure the contents, quality, quantity and strength of wastewater.

(y) Waters of the State" - Any water, surface or underground, including saline waters within the boundaries of the State.

ARTICLE II

REGULATIONS

SECTION 2.01 Prohibitions on Discharges. No person shall discharge wastes to a community sewer which cause, threaten to cause, or are capable of causing either alone or by interaction with other substances:

(a) A fire or explosion;

(b) Obstruction of flow or injury to the treatment works;

(c) Danger to life or safety of personnel;

(d) A strong offensive odor or prevention of the effective maintenance or operation of the treatment works;

(e) Air pollution by the release of toxic or malodorous gases or malodorous gas-producing substances;

(f) Interference with the wastewater treatment process;

(g) SASM's effluent or any other product of the treatment process, residues, sludges, or scums, to be unsuitable of reclamation and reuse or to interfere with the reclamation process;

(h) A detrimental environmental impact or a nuisance in the Waters of the State or a condition unacceptable to any public agency having regulatory jurisdiction over SASM;

(i) Discoloration or any other condition in the quality of SASM's treatment works effluent such that receiving water quality requirements established by law cannot be met;

(j) Conditions at or near SASM's treatment works which violate any statute or any rule, regulation, or ordinance of any public agency or State or Federal regulatory body;

(k) Cause SASM's treatment works to be overloaded or cause excessive Agency collection or treatment costs, or may use a disproportionate share of the Agency's capacity;

(l) Containing solid materials that will interfere with the maintenance or operation of the treatment process;

(m) Having a temperature high enough to inhibit biological activity in the treatment process or to interfere with other operation or maintenance functions.

SECTION 2.02 Prohibitions on Storm Drainage and Groundwater. Storm water, groundwater, rainwater, street drainage, subsurface drainage or yard drainage shall not be discharged through direct or indirect connections to a community sewer unless a permit is issued by SASM. SASM may approve the discharge of such water only when no reasonable alternative method of disposal is available.

If a permit is granted for the discharge of such water into a community sewer, the user shall pay the applicable charges and fees and meet such other conditions as required by SASM.

SECTION 2.03 Prohibition on Unpolluted Water. Unpolluted water, including, but not limited to cooling water, process water or blow-down from cooling towers or evaporative coolers shall not be discharged through direct or indirect connection to a community sewer unless a permit is issued by the SASM. SASM may approve the discharge of such water only when no reasonable alternative method of disposal is available.

If a permit is granted for the discharge of such water into a community sewer, the user shall pay the applicable charges and fees and shall meet such other conditions as required by SASM.

SECTION 2.04 Limitations on Radioactive Wastes. No person shall discharge or cause to be discharged, any radioactive waste into a community sewer except:

(a) When the person is authorized to use radioactive materials by the State Department of Health or other governmental agency empowered to regulate the use of radioactive materials, and

(b) When the waste is discharged in strict conformity with current California Radiation Control Regulations (California Administrative Code, Title 17) and the Atomic Energy Commission regulations and recommendations for safe disposal, and

(c) When the person is in compliance with all rules and regulations of all other applicable regulatory agencies.

SECTION 2.05 Limitations on the Use of Garbage Grinders. Waste from garbage grinders shall not be discharged into a community sewer except:

(a) Wastes generated in preparation of food normally consumed on the premises, or

(b) Where the user has obtained a permit for that specific use from SASM, and agrees to undertake whatever self-monitoring is required to enable SASM to equitably determine the charges and fees based on the waste constituents and characteristics.

Such grinders must shred the waste to a degree that all particles will be carried freely under normal flow conditions prevailing in the community sewer. Garbage grinders shall not be used for grinding plastic, paper products, inert materials, or garden refuse.

SECTION 2.06 Limitations on Point of Discharge. No person shall discharge any substances directly into a manhole or other opening in a community sewer other than through an approved building sewer unless he has been issued a permit by SASM. If a permit is issued for such direct discharge

the user shall pay the applicable charges and fees and shall meet such other conditions as required by SASM.

SECTION 2.07 Holding Tank Waste. No person shall discharge any holding tank waste into a community sewer unless he has been issued a permit by SASM. Unless otherwise allowed by SASM under the terms and conditions of the permit, a separate permit must be secured for each separate discharge. This permit will state the specific location of discharge, the time of day the discharge is to occur, the volume of the discharge and the wastewater constituents and characteristics. If a permit is granted for discharge of such waste into a community sewer, the user shall pay the applicable charges and fees and shall meet such other conditions as required by SASM. An exception to the above is that no permit will be required for discharge of domestic wastes from mobile home holding tanks provided that such discharges are made into a SASM approved facility designed to receive such wastes.

SECTION 2.08 Limitations on Wastewater Strength.

SECTION 2.08.1 No person shall discharge wastewater containing in excess of:

0.1 mg/l arsenic
0.2 mg/l cadmium
2.0 mg/l copper
1.0 mg/l cyanide
1.0 mg/l lead
0.01 mg/l mercury
1.0 mg/l nickel
0.2 mg/l silver
0.5 mg/l total chromium
3.0 mg/l zinc

SECTION 2.08.2 No person shall discharge any wastewater:

(a) Containing more than 300 mg/l of Oil or Grease of animal or vegetable origin.

(b) Containing more than 100 mg/l of Oil or Grease of mineral or petroleum origin.

(c) Having a pH lower than 6.0.

(d) Containing in excess of 0.02 mg/l total identifiable chlorinated hydrocarbons which cannot be removed by SASM's wastewater treatment process.

(e) Containing in excess of 1.0 mg/l phenolic compounds which cannot be removed by SASM's wastewater treatment process.

SECTION 2.08.3 Effluent limitations promulgated by the Federal Act shall apply in any instance where they are more stringent than those in this Ordinance. Under Section 307(b) of the Act, Federal pretreatment standards are designed to achieve two purposes: (1) to protect the operation of publicly owned treatment works, and (2) to prevent the discharge of pollutants which pass through such works inadequately treated. Users in industrial categories subject to effluent guidelines issued under Section 304(b) of the Act, which are discharging incompatible pollutants to publicly owned treatment works, are required to adopt best practicable control technology currently available, as defined by the Administrator pursuant to Section 304(b) of the Act. Where SASM's treatment works was designed to and does achieve substantial removal of pollutants other than the four pollutants listed in the definition for compatible pollutants in Section 1.02f (BOD, suspended solids, pH, and fecal coliform bacteria), SASM may, at its discretion, not require the user to achieve best practicable control technology currently available, since this would lead to an uneconomical duplication of treatment facilities. While the term "substantial removal" is not subject to precise definition, it generally contemplates removals in the order of 80 per cent or greater. Minor incidental removals in the order of 10 to 30 per cent are not considered "substantial." For some industrial categories it may be necessary to define pretreatment guidelines for problems that may arise as a result of the discharge into SASM's treatment works. However, any adjustments required for particular industrial categories should be considered in connection with SASM's requirements rather than in the national pretreatment standard.

(a) If SASM determines that the limitation in Sections 2.08.1 and 2.08.2 may not be sufficient to protect the operation of the SASM's treatment works, or

(b) If SASM determines that the limitations in Sections 2.08.1 and 2.08.2 may not be sufficient to enable SASM's treatment works to comply with water quality standards or effluent limitations specified in SASM's National Pollutant Discharge Elimination System (NPDES) permit.

SECTION 2.09 Disposal of Unacceptable Waste. Waste not permitted to be discharged into the community sewer must be transported to a State approved disposal site. The required "Waste Haulers Report" must be completed and a copy furnished within 30 days to SASM by the discharger.

ARTICLE III

DISCHARGE REPORT, WASTEWATER DISCHARGE PERMITS, AND ADMINISTRATION

SECTION 3.01 Discharge Reports. SASM may require that any person discharging or proposing to discharge wastewater into a community sewer file a periodic Discharge Report. The Discharge Report may include, but not be limited to, nature of process, volume, rates of flow, mass emission rate, production quantities, hours of operation, number and classification of employees, or other information which relates to the generation of waste including wastewater discharge. Such reports may also include the chemical constituents and quantity of liquid or gaseous materials stored on site even though they are not normally discharged. In addition to Discharge Reports, the Agency may require information in the form of Wastewater Discharge Permit applications and self-monitoring reports.

SECTION 3.02 Wastewater Discharge Permits.

SECTION 3.02.1 Mandatory Permits. Each "major contributing industry" as defined in Section 1.02 or other users with a discharge equivalent to that of a major contributing industry, if not connected to a community sewer, must obtain a Wastewater Discharge Permit before connecting to or discharging into a community sewer. Each currently connected "major contributing industry" or equivalent user must obtain a Wastewater Discharge Permit within 90 days after the effective date of this Ordinance.

SECTION 3.02.2 Optional Permits. The Manager may issue a Wastewater Discharge Permit to any user, upon application, in accordance with the terms of this section in the following categories.

(a) A user who requests charges and fees to be based on an estimate of wastewater flow, or

(b) Any user whose wastewater strength is less than the normal range for the user classification to which he is assigned because of pretreatment, process changes or other reasons.

SECTION 3.02.3 Permit Application. Users seeking a Wastewater Discharge Permit shall complete and file with the Manager, an application in the form prescribed by the Manager, and accompanied by the applicable fees. The applicant may be required to submit, in units and terms appropriate for evaluation, the following information.

(a) Name, address, and SIC number of applicant;

(b) Volume of wastewater to be discharged;

(c) Wastewater constituents and characteristics including but not limited to those mentioned in Sections 2.08 as determined by a laboratory approved by SASM;

(d) Time and duration of discharge;

(e) Average and 30-minute peak wastewater flow rates, including daily, monthly, and seasonal variations if any;

(f) Site plans, floor plans, mechanical and plumbing plans, and details to shown all sewers and appurtenances by size, location, and elevation;

(g) Description of activities, facilities and plant processes on the premises including all materials, processes and types of materials which are or could be discharged;

(h) Each product produced by type, amount, and rate of production;

(i) Number and type of employees, and hours of work;

(j) Any other information as may be deemed by the Manager to be necessary to evaluate the permit application.

The Manager will evaluate the data furnished by the user and may require additional information. After evaluation and approval of all the data required, the Manager may issue a Wastewater Discharge Permit subject to terms and conditions provided herein.

SECTION 3.02.4 Permit Conditions. Wastewater Discharge Permits shall be expressly subject to all provisions of this Ordinance and all other ordinances, regulations, charges and fees established by SASM. The conditions of Wastewater Discharge Permits shall be uniformly enforced by the Manager in accordance with this Ordinance, and applicable State and Federal regulations. Permits may contain the following:

(a) The unit charge or schedule of charges and fees for the wastewater to be discharged to a community sewer;

(b) The average and maximum wastewater constituents and characteristics;

(c) Limits on rate and time of discharge or requirements for flow regulations and equalization;

(d) Requirements for installation of inspection and sampling facilities;

(e) Pretreatment requirements;

(f) Specifications for monitoring programs which may include sampling locations, frequency and method of sampling, number, types and standards for tests and reporting schedule;

(g) Requirements for submission of technical reports or discharge reports;

(h) Requirements for maintaining plant records relating to wastewater discharge as specified by SASM, and affording SASM access thereto;

(i) Mean and maximum mass emission rates, or other appropriate limits when incompatible pollutants (as defined by Section 1.02j) are proposed or present in the user's wastewater discharge.

(j) Other conditions as deemed appropriate by SASM to insure compliance with this Ordinance.

SECTION 3.02.5 Duration of Permits. Wastewater Discharge Permits shall be issued for a specified time period, not to exceed five (5) years. A Permit may be issued for a period less than a year or may be stated to expire on a specific date. If the user is not notified by the Agency 30 days prior to the expiration of the Permit, the Permit shall be extended one additional year. The terms and conditions of the Permit may be subject to modification and change by SASM during the life of the Permit as limitations or requirements as identified in Section 2.08 are modified and changed. The user shall be informed of any proposed changed in his Permit at least 30 days prior to the effective date of change. Any changes or new conditions in the Permit shall include a reasonable time schedule for compliance.

SECTION 3.02.6 Transfer of a Permit. Wastewater Discharge Permits are issued to a specific user for a specific operation. A Wastewater Discharge Permit shall not be reassigned or transferred or sold to a new owner, new user, different premises, or a new or changed operation.

SECTION 3.02.7 Revocation of Permit. Any user who violates the conditions of the Wastewater Discharge Permit, any provisions of this Ordinance, applicable State and Federal regulations, or any of the following, is subject to having his Permit revoked:

(a) Failure of user to factually report the wastewater constituents and characteristics of his discharge;

(b) Failure of the user to report significant changes in operations, or wastewater constituents and characteristics; or

(c) Refusal of reasonable access to the user's premises for the purpose of inspection or monitoring.

SECTION 3.03 Monitoring Facilities. Users who propose to discharge, or who in the judgement of SASM could discharge now or in the future, wastewater with constituents and characteristics different from that produced by a domestic premise may be required to install a monitoring facility.

When more than one user can discharge into a common building sewer, SASM may require installation of a separate monitoring facility for each user. Also when, in the judgment of SASM, there is a significant difference in wastewater constituents and characteristics produced by different operations of a single user, SASM may require that separate monitoring facilities be installed for each separate discharge.

Monitoring facilities that are required to be installed shall be constructed, operated and maintained at the user's expense. The purpose of the facility is to enable inspection, sampling and flow measurement of wastewaters produced by a user. If sampling or metering equipment is also required by SASM it shall be provided, installed, and operated at the user's expense. The monitoring facility will normally be required to be located on the user's premises outside of the building. SASM may, however, when such a location would be impractical or cause undue hardship on the user, allow the facility to be constructed in the public street or sidewalk area, with the approval of the public agency having jurisdiction over that street or sidewalk, and located so that it will not be obstructed by landscaping or parked vehicles.

If the monitoring facility is inside the user's fence, there shall be accommodations to allow safe and immediate access for SASM personnel, such as a gate secured with a SASM lock. There shall be ample room in or near such facility to allow accurate sampling and compositing of samples for analysis. The entire facility and the sampling and measuring equipment shall be maintained at all times in a safe and proper operating condition by and at the expense of the user.

Whether constructed on public or private property, the monitoring facilities shall be constructed in accordance with SASM's requirements and all applicable local construction standards and specifications.

When, in the judgment of SASM, an existing user requires a monitoring facility, the user will be so notified in writing. Construction must be completed within 90 days following written notification unless a time extension is otherwise granted by SASM.

SECTION 3.04 Inspection and Sampling. SASM may inspect the facilities of any user to ascertain whether the purpose of this Ordinance is being met and all requirements are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow SASM or its representative ready access at all reasonable times to all parts of the premises for the purposes of inspection or sampling or in the performance of any of their duties. SASM shall have the right to set up on the user's property such devices as are necessary to conduct sampling or metering operations. Where a user has security measures in force which would require proper identification and clearance before entry into their premises, the user shall make necessary arrangements with their security guards so that upon presentation of suitable identification, personnel from SASM will be permitted to enter without delay for the purposes of performing their specific responsiblilities.

SECTION 3.05 Pretreatment. Users shall make wastewater acceptable under the limitations established herein before discharging into any community sewer. Any facilities required to pretreat wastewater to a level acceptable to SASM shall be provided and maintained at the user's

expense. Detailed plans showing the pretreatment facilities and operating procedures shall be submitted to SASM for review, and shall be approved by the Agency before construction of the facility. The review and approval of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the facility as necessary to produce an effluent complying with the provisions of this Ordinance. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to and be approved by SASM.

SECTION 3.06 Protection from Accidental Discharge. Each user shall provide protection from accidental discharge of prohibited materials or other wastes regulated by this Ordinance. Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the user's expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to SASM for review, and shall be approved by SASM before construction of the facility.

The review and approval of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the facility as necessary to provide the protection necessary to meet the requirements of this Ordinance.

SECTION 3.07 Confidential Information. All information and data on a user obtained from reports, questionnaires, permit applications, permits and monitoring programs, and from inspections shall be available to the public or any other governmental agency without restriction unless the user specifically requests and is able to demonstrate to the satisfaction of SASM that the release of such information would divulge information, processes or methods which would be detrimental to the users' competitive position.

When requested by the person furnishing a report, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public but shall be made available to governmental agencies for use in making studies; provided, however, that such portions of a report shall be available for use by the state or any

state agency in judicial review or enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics will not be recognized as confidential information.

Information accepted by SASM as confidential, shall not be transmitted to any governmental agency or to the general public by SASM until and unless prior and adequate notification is given to the user.

SECTION 3.08 Special Agreements. Special agreements and arrangements between SASM and any persons or agencies may be established when in the opinion of SASM unusual or extraordinary circumstances compel special terms and conditions. Special agreements will only be entered into provided they conform to state and federal requirements.

SECTION 3.09 Plans for and Inspection of Sewerage Construction. Plans for sewerage construction shall meet all design requirements of the Agency having area jurisdiction and shall also meet the design requirements as established from time to time by the Engineer of SASM.

Inspection of all sewerage construction shall be made by personnel of the Agency in the manner described in the rules and regulations pertaining thereto.

ARTICLE IV

ENFORCEMENT

SECTION 4.01 Accidental Discharges.

SECTION 4.01.1 Notification of Discharge. Users shall notify SASM immediately upon accidentally discharging wastes in violation of this Ordinance to enable countermeasures to be taken by SASM to minimize damage to the community sewer, treatment facility, treatment processes and the receiving waters.

This notification shall be followed, within 15 days of the date of occurrence, by a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrence.

Such notification will not relieve users of liability for any expense, loss or damage to the sewer system, treatment plant, or treatment process, or for any fines imposed on SASM on account thereof under Section 13350 of the California Water Code or for violations of Section 5650 of the California Fish and Game Code.

SECTION 4.01.2 Notices to Employees. In order that employees of users be informed of SASM requirements, users shall make available to their employees copies of this Ordinance together with such other wastewater information and notices which may be furnished by SASM from time to time directed toward more effective water pollution control. A notice shall be furnished and permanently posted on the user's bulletin board advising employees whom to call in case of an accidental discharge in violation of this Ordinance.

SECTION 4.01.3 Preventive Measures. Any direct or indirect connection or entry point for persistent or deleterious wastes to the user's plumbing or drainage system should be eliminated. Where such

action is impractical or unreasonable the user shall appropriately label such entry points to warn against discharge of such wastes in violation of this Ordinance.

SECTION 4.02 Issuance of Cease and Desist Orders. When the Agency finds that a discharge of wastewater has taken place, in violation of prohibitions or limitations of this Ordinance, or the provisions of a Wastewater Discharge Permit, the Manager may issue an order to cease and desist, and direct that those persons not complying with such prohibitions, limits, requirements, or provisions to:

(a) Comply forthwith;

(b) Comply in accordance with a time schedule set forth by the Agency, or

(c) Take appropriate remedial or preventive action in the event of a threatened violation.

SECTION 4.03 Submission of Time Schedule. When SASM finds that a discharge of wastewater has been taking place, in violation of prohibitions or limitations prescribed in this Ordinance, or wastewater source control requirements, effluent limitations or pretreatment standards, or the provisions of a Wastewater Discharge Permit, SASM may require the user to submit for approval, with such modification as it deems necessary, a detailed time schedule of specific actions which the user shall take in order to prevent or correct a violation of requirements.

SECTION 4.04 Appeals. Any user, permit applicant, or permit holder affected by any decision, action, or determination, including Cease and Desist Orders, made by the Manager, interpreting or implementing the provisions of this Ordinance or in any permit issued herein, may file with the Manager a written request for reconsideration within 10 days of such decision, action, or determination, setting forth in detail the facts supporting the user's request for reconsideration.

If the ruling made by the Manager is unsatisfactory to the person requesting reconsideration, he may within 10 days after notification of SASM action, file a written appeal to SASM's governing body. The written appeal shall be heard by the governing body within 30 days from the date of filing. SASM's governing body shall make a final ruling on the appeal within 15 days of the close of the meeting. The Manager's decision, action, or determination shall remain in effect during such period of reconsideration.

ARTICLE V

ABATEMENT

SECTION 5.01 Public Nuisance. Discharges of wastewater in any manner in violation of this Ordinance or of any order issued by the Manager as authorized by this Ordinance, is hereby declared a public nuisance and shall be corrected or abated as directed by the Manager. Any person creating a public nuisance shall be subject to provisions of Agency codes or ordinances governing such nuisance.

SECTION 5.02 Injunction. Whenever a discharge of wastewater is in violation of the provisions of this Ordinance or otherwise causes or threatens to cause a condition of contamination, pollution or nuisance, SASM may petition the Superior Court for the issuance of a preliminary or permanent injunction or both, as may be appropriate in restraining the continuance of such discharge.

SECTION 5.03 Damage to Facilities. When a discharge of wastes causes an obstruction, damage, or any other impairment to SASM facilities, SASM may assess a charge against the user for the work required to clean or repair the facility and add such charge to the user's sewer service charge.

SECTION 5.04 Correction of Violations; Collection of Costs; Injunction. In order to enforce the provisions of this Ordinance, the Agency may correct any violation hereof. The cost of such correction may be added to any sewer service charge payable by the person violating the Ordinance or the owner or tenant of the property upon which the violation occurred, and SASM shall have such remedies for the collection of such costs as it has for the collection of sewer service charges. SASM may also petition the Superior Court for the issuance of a preliminary or permanent injunction, or both, as may be appropriate, restraining any person from the continued violation of this Ordinance.

SECTION 5.05 Civil Liabilities and Penalties. Any person who intentionally or negligently violates any provision of this Ordinance, requirements, or conditions set forth in permits duly issued, or who discharges wastewater which causes pollution, or violates any cease and desist order, prohibition, effluent limitation, national standard of performance, pretreatment or toxicity standard, shall be liable civilly to liabilities imposed by SASM against which the violation occurs. Said civil liability may be in a sum of not to exceed six thousand dollars ($6,000) for each day in which such violation occurs.

SASM may petition the Superior Court to impose, assess and recover such sums. In determining such amount, the court shall take into consideration all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the nature and persistence of the violation, the length of time over which the violation occurs, and corrective action, if any.

SECTION 5.06 Falsifying of Information. Any person who knowingly makes any false statements, representation, record, report, plan or other document filed with SASM or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this Ordinance, is hereby declared to be in violation of this Ordinance, and subject to the Civil Liabilities imposed under Section 5.05 of this Ordinance, or subject to prosecution and punishment under Section 5.06 of this Ordinance.

SECTION 5.07 Termination of Service. In order to effect its powers, SASM or the appropriate member Agency may enter upon private property for the purpose of inspection and maintenance of sanitary and waste disposal facilities and may terminate service to property in which a violation of any rule, regulation, or this Ordinance is found to exist.

Prior to termination of service, however, the SASM Board shall notify, in writing, the owner and tenant, if any, of such property that service is intended to be so terminated and conduct a hearing theron as herein provided. Such notice shall be mailed to the owner at the address

shown on the records of the Assessor of the County, or as known to the Clerk, and a copy shall be delivered to the tenant or posted conspicuously on the property. The notice shall state the date of proposed termination of service and the reasons therefor and the date the SASM Board shall hold a hearing upon such intended termination. Such hearing shall not be held less than ten days subsequent to the giving of notice as herein required.

ARTICLE VI

SEVERABILITY

If any provision of this Ordinance or the application to any person or circumstances is held invalid, the remainder of the Ordinance or the application of such provisions to other persons or other circumstances shall not be affected.

ARTICLE VII

AMENDMENTS AND MODIFICATIONS

The Agency may, from time to time, modify the provisions of this Wastewater Discharge Ordinance for any reason the Agency deems appropriate. Any changes shall be complied with by any person that is currently or beginning discharging to the treatment works.

Bertram L. Davis
President
Sewerage Agency of Southern Marin

Countersigned:

Howard W. Lemmon
Secretary

(Seal)

I hereby certify that the foregoing is a full, true, and correct copy of an ordinance which was duly and regularly passed and adopted by the Board of Commissioners of the Sewerage Agency of Southern Marin, Marin County, California, at a meeting duly held on the 21st day of April, 1983, by the following vote of the Commissioners thereof;

AYES, and in favor thereof, Commissioners: Binderup, Davies, Rein, Roberts, Sievers and Willat.

NOES, Commissioners: None.

ABSENT, Commissioners:

Secretary

(Seal)

SEWERAGE AGENCY OF SOUTHERN MARIN
RESTATED JOINT EXERCISE OF POWERS AGREEMENT
(Restated as of January 27, 2000)

SEWERAGE AGENCY OF SOUTHERN MARIN
RESTATED JOINT EXERCISE OF POWERS AGREEMENT
(Restated as of January 27, 2000)

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This "Restated Agreement" is made and entered into by and between the local government entities who are presently parties to the "Sewerage Agency of Southern Marin Joint Exercise of Powers Agreement" dated June 1, 1979 (the "Agreement") or who subsequently become parties to this Restated Agreement.

Recitals

1.0. The Sewerage Agency of Southern Marin (the "Agency") was formed by the Almonte Sanitary District, Alto Sanitary District, City of Mill Valley, Richardson Bay Sanitary District and Tamalpais Community Services District when those public agencies (the "Member Entities") executed the Agreement effective July 1, 1979.

2.0. The Agreement has been amended six times since the Agency was formed. One such amendment, the Second Amendment dated October 15, 1979, added Homestead Valley Sanitary District as a party to the Agreement as a Member Entity.

3.0. The Member Entities of the Agency wish to restate the Agreement for the following reasons:

3.1. To modernize the Agreement by eliminating outdated provisions and by adding new provisions which reflect the Agency's current organizational philosophy and operational practices; and

3.2 To incorporate all of the provisions of the Agreement in a single written instrument.

Terms and Conditions

In consideration of the Recitals stated above and the following Terms and Conditions, the Member Entities of the Agency agree that the Agreement shall be amended and restated in its entirety to read as follows:

Section 1. Definition of Terms.

"Act" means the provisions of Chapter 5 of Division 7 of Title 1 of the Government Code (commencing with Section 6500) pertaining to joint exercise of powers agreements.

"Agency" means the Sewerage Agency of Southern Marin.

"Agreement" means the "Sewerage Agency of Southern Marin Joint Exercise of Powers Agreement" dated June 1, 1979, together with the six amendments to the Agreement approved prior to the effective date of this Restated Agreement.

"Commission" means the governing board of the Agency.

"Member Entity" means any city or district which is a party to this Restated Agreement. Currently the Member Entities are the: Almonte Sanitary District, Alto Sanitary District, City of Mill Valley, Homestead Valley Sanitary District, Richardson Bay Sanitary District, and Tamalpais Community Services District.

"Sewer Service Charge" means a periodic lump sum charge payable by each Member Entity to the Agency in accordance with this Restated Agreement

"Restated Agreement" means this "Sewerage Agency of Southern Marin Restated Joint Exercise of Powers Agreement".

Section 2. Creation of Agency. The Agency is a public agency of the State of California which was formed by the Agreement pursuant to the provisions of Article 1, Chapter 5, Division 7, Title 1 of the Government Code of the State of California relating to the joint exercise of powers common to public agencies. The Agency is a separate public agency apart from the Member Entities and is the agency which shall administer and execute this Restated Agreement.

Section 3. Purposes. The purposes of this Restated Agreement are to continue the Agency and to plan, acquire, construct, maintain, own and operate facilities for the collection, treatment, reclamation and disposal of sewage and other wastewater for the benefit of lands and inhabitants within or without the collective boundaries of the Member Entities.

Section 4. Term and Effect. This Restated Agreement shall become effective when all eligible Member Entities have approved and authorized its execution by their respective governing bodies and it shall continue in full force and effect until the Agency is dissolved as provided in Section 21.2. This Restated Agreement supersedes the Agreement and any other existing agreements between Member Entities providing for wastewater treatment and disposal.

Section 5. Powers.

5.1. The Agency has the power and authority to plan, acquire, construct, maintain, own and operate facilities for the collection, treatment, reclamation and disposal of sewage and other wastewater for the benefit of lands and inhabitants within or without the boundaries of the Member Entities. The Member Entities relinquish, and the Agency assumes for the benefit of the Member Entities, responsibility for all functions pertaining to the treatment and disposal of sewage and other wastewater. The Agency may perform directly or enter into contracts to perform any or all of these functions.

5.2. The Agency is authorized, in its own name, to do all acts necessary for the exercise of it powers for the purposes of this Restated Agreement, including but not limited to any or all of the following:

5.2.1. To make and enter into contracts and apply for and accept grants, advances, and contributions;

5.2.2. To employ agents, consultants and employees;

5.2.3. To acquire, construct, manage, maintain and operate any buildings, works or improvements;

5.2.4. To acquire, hold or dispose of property;

5.2.5. To sue and be sued in its own name;

5.2.6. To incur debts, liabilities, or obligations; to issue revenue bonds, notes, warrants, and other evidences of indebtedness to finance the costs and incidental expenses of the projects of the Agency;

5.2.7. To exercise all powers conferred by the Act;

5.2.8. To exercise all powers conferred by other provisions of this Restated Agreement; and

5.2.9. To exercise all other powers common to the Member Entities not specifically mentioned in this Restated Agreement which may be necessary to carry out the purposes of this Restated Agreement.

5.3. The Agency and/or any one or more of its Member Entities are authorized to participate, jointly or severally, in any program of insurance or self-insurance as to which participation by public agencies is authorized under California law. The expense of participation in such programs shall be shared proportionately by the participants according to their respective responsibilities for the costs of premiums, deductibles, fees, retentions or other assessments of any kind, as well as costs of administration and overhead and other relevant factors. No part of the costs of any such program shall be borne, directly or indirectly, by any party to this Restated Agreement who is not a participant in that program.

5.4. No debt, liability or obligation of the Agency shall constitute a debt, liability or obligation of any Member Entity.

5.5. The Agency has no power to levy or cause to be levied ad valorem property taxes.

5.6. As required by Government Code Section 6509, the manner in which the Agency exercises its powers shall be subject to the restrictions applicable to the exercise of powers by a sanitary district pursuant to the Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.).

Section 6. Governing Body of the Agency. The Agency shall be governed by the Commission. Each Member Entity shall appoint one commissioner as its representative on the Commission. Each commissioner shall have one vote. Each Member Entity shall also appoint an alternate who shall exercise the Member Entity's voting right in the absence of the regular commissioner. Each commissioner and alternate shall be a voting member of the governing body of the Member Entity that he or she represents and shall serve at the will and pleasure of that Member Entity.

Section 7. Officers and Duties.

7.1. A President, a Vice-President and a Secretary shall be elected by the Commission from its own members. The term of each office shall be one year and thereafter until a successor is elected.

7.2. The Agency's officers shall perform directly, or, with approval of the Commission, cause to be performed by other Agency representatives, the duties described below and such other duties as may be imposed by the Commission:

7.2.1. President: Sign contracts and other instruments on behalf of the Agency.

7.2.2. Vice President: Act in the absence of the President.

7.2.3. Secretary: Countersign contracts and instruments on behalf of the Agency; keep minutes of all Commission meetings, copies of which shall be provided to Commission members and the Member Entities.

7.3. The Commission may appoint a General Manager who shall perform such duties as specified in this Restated Agreement and as assigned and directed by the Commission. The General Manager shall report to the Commission.

7.4. In the absence of a General Manager, the Commission shall cause the duties of the General Manager to be performed by other persons.

7.5. The Commission shall designate a person who has the qualifications specified in Government Code Sections 6505.5 and 6505.6 as the Agency's Treasurer. Unless the Commission specifies otherwise, the Treasurer shall also serve as Auditor-Controller of the Agency to draw warrants to pay demands against the Agency approved by the Commission. The Treasurer and Auditor-Controller shall have the duties and obligations set forth in Government Code Sections 6505.5 and 6505.6.

Section 8. Enforcement.

8.1. The Agency is authorized to take any or all legal and equitable actions, including but not limited to injunction and specific performance, which are necessary and permitted by law to enforce this Restated Agreement.

8.2. The Agency is authorized and empowered to require the Member Entities to observe and comply with applicable provisions of law and any and all orders, contractual commitments, regulatory standards, permits and grant conditions, and other similar obligations and requirements which have been lawfully imposed on the Agency in the conduct of its governmental functions; and each Member Entity agrees to conform and comply with such obligations and requirements and, as necessary, to impose and enforce such obligations and requirements on its constituents and others to the extent the Member Entity is legally able to do so.

Section 9. Duties of the Commission; Compensation.

9.1. The duties of the Commission shall be:

9.1.1. To make all policy decisions.

9.1.2. To exercise all of the powers of the Agency except those which may be and have been lawfully delegated to others;

9.1.3. To submit full and regular reports to the Member Entities; and

9.1.4. To adopt from time to time such orders, resolutions, ordinances and other rules and regulations, including bylaws, for the conduct of its affairs and the business of the Agency as may be required.

9.1.5. To adopt an annual budget; and

9.1.6. To cause the obligations of the Agency under this Restated Agreement to be fully performed.

9.2. The members of the Commission shall receive no compensation except as may be provided by the respective Member Entities which they represent.

Section 10. Meetings of the Commission.

10.1. Regular meetings of the Commission shall be held at such time and place as shall be established by the Commission by resolution.

10.2. All meetings of the Commission shall be called, noticed, held and conducted in accordance with the provisions of the Ralph M. Brown Act (Section 54950 et seq.).

Section 11. Quorum. The attendance at a Commission Meeting of a majority of the voting members of the Commission constitutes a quorum. Any action of the Agency shall require the affirmative vote of a majority of the quorum unless by law a greater number of affirmative votes is required.

Section 12. Accountability Reports and Audits.

12.1. The Agency shall cause accurate and correct financial records and books of account to be kept as required by law and in conformance with the Uniform Systems of Accounts of the State Controller. There shall be strict accountability for all funds and properties of the Agency. The books and records of the Agency shall reflect all receipts and disbursements of the Agency including the details of the costs and expenses of construction, operation and maintenance of Agency properties and facilities and all financial transactions between the Agency and its Member Entities. The books and records of the Agency shall be open to inspection at all reasonable times by representatives of the Member Entities and the public.

12.2. The Commission shall cause annual audits of the accounts and financial records of the Agency to be conducted in accordance with the requirements of Government Code §§6505 and 6505.6.

12.3. The Commission shall cause periodic financial reports, including all such reports as are required by law, to be prepared and reviewed by the Commission on a regular basis.

Section 13. Bonding Persons Having Access to Property.

13.1. Any officer at the Agency or other person who has charge of, handles, or has access to cash, cash equivalents, securities, evidences of indebtedness, bank or investment accounts, or other financial instruments of any kind of the Agency, shall be required to file an official bond with the Agency in such amount as may be established by the Commission. Should an existing bond of any officer or officers or person or persons be extended to cover the obligations provided in this Restated Agreement, that bond shall be the official bond required to be posted by this Restated Agreement. The premium on any such bond or bonds shall be an appropriate expense of the Agency. Any payment to the Treasurer or Auditor-Controller required in the operation of the Agency shall be an appropriate charge against the Agency.

13.2. The General Manager shall have overall responsibility for the financial assets and other property of the Agency and shall cause all claims and demands for the disbursement of Agency funds to be reviewed and approved prior to submittal of the claims and demands to the Commission for its approval.

Section 14. Bonds.

14.1. The Agency shall have the power and authority to issue and sell bonds in accordance with applicable law.

14.2. For purposes of referendum and vote on an Agency-wide basis, the boundaries of the Agency shall be the consolidated boundaries of its Member Entities. Under applicable law, the Agency may form improvement districts in which event the boundaries of the improvement districts shall be determinative with respect to referendum and voting. Bond elections shall be conducted pursuant to the Uniform District Election Law and applicable provisions of the Elections Code.

14.3. The Agency shall have and exercise all powers conferred on "local agencies" by the provisions of the law with respect to revenue bonds.

Section 15. Operating Funds and Sewer Service Charges.

15.1. An operating fund shall be established and maintained which shall be used to pay all administrative and incidental expenses incurred by the Agency, together with all costs of maintenance and operations.

15.2. The Agency shall impose on and collect from the Member Entities a periodic Sewer Service Charge, the revenues from which shall be deposited in the operating fund. The manner in which the Sewer Service Charge is imposed and the amount of the charge shall be determined by the Agency.

15.3. Each Member Entity, in turn, shall derive the revenues necessary to pay its Sewer Service Charges to the Agency.

Section 16. Other Funds, Fees and Charges.

16.1. The Agency shall establish and maintain such other funds as are required to adequately account for revenues and expenses of the Agency which must or, in the discretion of the Commission, should be accounted for separately from the operating fund's revenues and expenses such as, for example, a fund or funds pertaining to capital facilities, repayment of bonds, and other similar activities.

16.2. In addition to its Sewer Service Charge, the Agency may impose and collect other fees and charges as authorized by law.

16.3. Excess capital funds, if any, generated by and not expended for annual capital replacement requirements, or from other sources, are the property of the Agency and, after approval by the Commission, may be used to pay for capital improvements, including payment of indebtedness incurred to make capital improvements or to establish reserves for such purposes.

16.4. Excess funds, if any, generated from whatever source for administration, operation and maintenance requirements but not expended are the property of the Agency. After provision, if any, for such reserves as the Commission determines are necessary and desirable, the Commission may allocate all or a share of such funds to reduce the amounts required for the following year's budget or to make capital improvements.

Section 17. Ownership and Operation of Properties and Facilities; Functional Responsibilities.

17.1. The Agency shall own, operate and maintain all properties and facilities which are or were contributed by the Member Entities or other properties and facilities which are or were financed by Agency funds including cash, Sewer Service Charge revenues and the proceeds from the sale of revenue bonds.

17.2. Member Entities shall retain ownership of and operate and maintain their respective properties and facilities including wastewater collector systems.

17.2.1. The Agency and any Member Entity may, by agreement, provide for operation and maintenance of that Member Entity's facilities, all or in part, by the Agency. Any such agreement must provide that all costs associated with the operation and maintenance of a Member Entity's facilities by the Agency shall be charged to and paid by the Member Entity.

17.2.2. Member Entities will be responsible for processing and review of permit applications, collection and accounting for permit fees, inspection of connections and all attendant record keeping, and will retain all fees generated from those functions.

17.2.3. Unless otherwise agreed upon, member Entities will have total responsibility for their respective wastewater collector systems and the right to impose charges to pay for this service within their respective jurisdictions is reserved to them.

Section 18. Hold Harmless.

18.1. It is specifically understood and agreed that no Member Entity nor any of its officers or employees, is responsible for any damage or liability occurring by reason of anything done or not done by the Agency in connection with any work, authority or jurisdiction not delegated to the Member Entity under this Restated Agreement. It is also understood and agreed that, pursuant to Government code Section 895.4, the Agency shall fully indemnify and hold each Member Entity harmless from any damage or liability occurring by reason of anything done or not done by the Agency in connection with any work, authority or jurisdiction not delegated to any of the Member Entities under this Restated Agreement.

18.2. It is specifically understood and agreed that neither Agency nor any of its officers or employees, is responsible for any damage or liability occurring by reason of anything done or not done by any of the Member Entities pursuant to this Restated Agreement. It is also understood and agreed that, pursuant to Government Code Section 895.4, each Member Entity shall fully indemnify and hold the Agency harmless from any damage or liability occurring by reason of anything done or not done by such Member Entity pursuant to this Restated Agreement.

Section 19. Capacity Allocation.

19.1. It has previously been established by the Commission and agreed to by the Member Entities that the Member Entities have been allocated and presently own capacity entitlements in the Agency's treatment plant and other jointly used capital facilities as follows:

Member Entity	Capacity Allocations By Percentage	By EDUs*
Almonte SD	5.2	936
Alto SD	3.4	612
Homestead Valley SD	7.3	1,314
City of Mill Valley	49.2	8,856
Richardson Bay SD	35.5	6,030
Tamalpais CSD	1.4	252
	100.0	18,000

*EDU - The average flow of wastewater produced by a single family Equivalent Dwelling Unit, which the parties have determined and agreed equates to 200 gallons per day.

19.2. Each Member Entity is entitled to discharge wastewater to the Agency for treatment, reclamation and disposal up to but not exceeding the Member Entity's established Capacity Allocation measured in EDUs.

19.3. The Agency's costs incurred for the repair, renovation and replacement of its capital facilities, as authorized and approved by the Commission, shall be allocated to the Member Entities, and the Member Entities shall pay those costs in the same proportions as their respective percentages of the Capacity Allocations.

19.4. Member Entities may enter into agreements with one or more other Member Entities to acquire, temporarily or permanently, some portion or all of that Member Entity(ies') unused Capacity Allocation upon such terms and conditions as the affected Member Entities may mutually agree in writing; but no such agreement shall be effective without the consent of the Agency, which consent shall not be unreasonably withheld. Agency considerations will include an assessment of the impact on the adequacy of Agency facilities. Any reallocations of Capacity Allocations pursuant to this Subsection shall be recognized by the Agency for purposes of capital facilities charges and other similar purposes.

19.5. If the Commission undertakes to increase the capacity of the Agency's capital facilities, only those Member Entities which elect to purchase and pay for additional Capacity Allocations shall share in the new capacity, such sharing to be in proportion to the participating Member Entities'

respective contributions. But no such increase in the Agency's capacity shall affect the right of Member Entity to continue to discharge wastewater pursuant to the Member Entity's present Capacity Allocation except to the extent it may subsequently be modified pursuant to Section 19.4 above.

19.6. The provisions of this Section are for the benefit of the Agency and of each Member Entity, and any affected party is entitled to pursue such remedies as may be afforded by law to protect the party's interests.

Section 20. Settlement of Disputes.

20.1. Except as indicated in Subsections 20.2 and 20.3 below, if a dispute arises as to the construction, interpretation or implementation of any provision of this Restated Agreement and the dispute directly affects the Agency, the dispute shall be submitted to binding arbitration in accordance with Sections 20.1 and 20.4.

20.2. A dispute between two or more Member Entities which does not directly affect the Agency is not governed by this Section.

20.3. At the request of any party to a dispute concerning the withdrawal of a Member Entity from the Agency or the termination of the Agency, the dispute shall not be governed by Sections 20.1 and 20.4.

20.4. Except as otherwise provided in this Section, the arbitration proceeding shall be conducted in accordance with the provisions of Title 9 of Part 3 of the Code of Civil Procedure.

20.5. A single arbitrator shall be selected by unanimous agreement of all members of the Commission. In the absence of unanimous agreement, the Commission, by majority vote (counted by excluding the votes of members in dissent), shall select an arbitrator and the members of the Commission in dissent shall select an arbitrator. The two arbitrators so selected shall select a third arbitrator and the dispute shall be determined by a majority vote of the panel of arbitrators. If for any reason the parties are unable to select an arbitrator in accordance with the provisions of this Subsection, the arbitrator shall be appointed by the Presiding Judge of the Marin County Superior Court.

20.6. The fees and expenses of the arbitrator or arbitrators shall be shared equally by each side to the dispute. Otherwise each party shall bear its own costs and expenses of the proceedings, including attorneys' fees.

20.7. Nothing in this Section shall preclude any party in a proper case from commencing a proceeding in a court of law seeking urgent interim or provisional relief. Pursuit of interim or provisional relief shall not constitute a waiver of the right to pursue arbitration under this Section, nor shall it relieve a party of its obligation to arbitrate all matters pertaining to the dispute which are not resolved by the court.

Section 21. Withdrawal or Dissolution. Upon withdrawal of a Member Entity from the Agency or upon dissolution of the Agency, there shall be partial or complete distribution of assets and discharge of liabilities as follows:

21.1. Withdrawal.

21.1.1. A Member Entity may withdraw from the Agency with the unanimous consent of the remaining Member Entities and upon mutually agreeable terms and conditions. In the absence of unanimous consent and mutual agreement, a Member Entity may withdraw only if the Agency's continued existence and governmental effectiveness will not be jeopardized by the withdrawal of the Member Entity and the Member Entity pays or secures payment of (a) all cost and expenses incurred by reason of the Member Entity's withdrawal and (b) the value of any economic detriment suffered or to be suffered by the Agency due to the withdrawal.

21.1.2. Upon withdrawal of any Member Entity from the Agency, the withdrawing Member Entity shall receive its proportionate share of the assets of the Agency and shall contribute its proportionate share toward discharge of the liabilities of the Agency, whether actual or contingent, as the same appear on the books of the Agency.

21.2. Dissolution. The Agency may be dissolved at any time by unanimous agreement of its Member Entities. Upon dissolution of the Agency, each Member Entity shall receive its proportionate share of the assets of the Agency and shall contribute its proportionate share toward discharge of any enforceable liabilities incurred by the Agency as the same appear on the books of the Agency.

21.3. For purposes of distributions and contributions required by Sections 21.1.2 and 21.2 above, the determination of what constitutes a "proportionate share" shall be made by the Commission in accordance with the following principles:

21.3.1. A "proportionate share" is an amount of money, property or money and property measured in dollars which the Commission determines is owed to or by a Member Entity taking into account pertinent factors such as, for example, the value of contributions made to the Agency by the Member Entity as compared to the contributions of other Member Entities, the proportionate value of benefits received by a Member Entity, the time value of money, the length of the Member Entity's participation in the Agency, and any other factors which the Commission determines to be reasonable and relevant and will lead to a fair and equitable result for all Member Entities and the Agency.

21.3.2. Any surplus money remaining after dissolution shall be returned to the Member Entities pursuant to Government Code Section 6512 in proportion to the respective contributions made by the Member Entities to the Agency.

21.3.3. The Agency's assets may be distributed in kind or they may be sold and the

proceeds distributed. If assets are to be distributed in kind and if a particular asset was contributed by a Member Entity, the asset shall be reconveyed to the contributing Member Entity if that Member Entity so requests and the reconveyance is otherwise consistent with that Member Entity's proportionate share.

21.3.4. Contributions which may be required of a Member Entity pursuant to Section 21.1.2 shall be made in money and not by property unless the Commission expressly agrees to accept a contribution of property

Section 22. Miscellaneous.

22.1. The section headings used in this Restated Agreement are for convenience only and are not to be construed as modifying or governing the language in the section referred to.

22.2. This Restated Agreement is made in the State of California and under its Constitution and laws, and it is to be so construed.

22.3. To preserve a reasonable degree of flexibility, many parts of this Restated Agreement are stated in general terms. The Commission may from time to time adopt and implement rules and regulations to further define the rights and obligations of the Member Entities and of the Agency to carry out the purposes of this Restated Agreement.

22.4. This Restated Agreement may be amended in any particular, from time to time, by unanimous approval of the Member Entities.

Section 23. Partial Invalidity. If any one or more of the terms, provisions, promises, covenants, or conditions of this Restated Agreement shall to any extent be adjudged invalid, unenforceable, void, or voidable for any reason by a court of competent jurisdiction, each and all of the remaining terms, provisions, promises, covenants, and conditions of this Restated Agreement shall not be affected and they shall be valid and enforceable to the fullest extent permitted by law.

Section 24. Successors. This Restated Agreement shall be binding upon and shall inure to the benefit of the successors of the parties.

Section 25. Effective Date. The effective date of this Restated Agreement shall be January 27, 2000.

As evidence of their Restated Agreement, each of the Member Entities has caused this instrument to be executed and attested by its duly authorized officers, and its official seal to be applied.

ALMONTE SANITARY DISTRICT

President

ATTEST:

Secretary (Seal)

ALTO SANITARY DISTRICT

President

ATTEST:

Secretary (Seal)

CITY OF MILL VALLEY

Mayor

ATTEST:

City Clerk (Seal)

HOMESTEAD VALLEY SANITARY DISTRICT

President

ATTEST:

Secretary (Seal)

RICHARDSON BAY SANITARY DISTRICT

President

ATTEST:

Secretary (Seal)

TAMALPAIS COMMUNITY SERVICES DISTRICT

President

ATTEST:

Secretary (Seal)

APPENDIX C

Specifications for Building Sewer Construction

APPENDIX "C"

SPECIFICATIONS FOR BUILDING SEWER CONSTRUCTION
HOMESTEAD VALLEY SANITARY DISTRICT
RICHARDSON BAY SANITARY DISTRICT

ALMONTE SANITARY DISTRICT

Specifications for Installation of Building Sewers

All building sewers installed within the District shall conform to the following minimum standards and requirements.

I. PROCEDURES

A. Jurisdiction

All property to be served shall be within the Homestead Valley, Almonte & Richardson Bay Sanitary District boundaries. The District has jurisdiction over all private building sewers from a point two (2) feet or less outside the building foundation to the point of connection to the District sewer system. District jurisdiction includes, but is not limited to, issuance of permits to construct, specification of design, type of material and construction requirements as well as inspection and testing.

B. Ownership

All private sewers, building sewers, or pumping or lift systems from inside the structures to the point of connection to the District system are owned privately and are to be maintained by the owner of the property served.

C. Liability

The District and its officers and employees shall not be liable for injury or death to any person or damage to any property arising during, or growing out of, the performance of any work described in this ordinance.

D. Permit Required

Prior to installation of any new building sewer or plumbing alteration, a sewer connection permit must be secured from the District Office.

Note: New plumbing or plumbing changes within the building come under jurisdiction of the Town of Tiburon or Marin County Building Department and will require a separate permit from these agencies.

E. Compliance with Regulations

Any person constructing a sewer within a street shall comply with all State, County, or City laws, ordinances, rules and regulations pertaining to the cutting of pavement, opening, barricading, lighting and protection of trenches, backfilling and repaving thereof and shall obtain all permits and pay all fees required by the department having jurisdiction prior to the issuance of a permit by the District. Any

person requesting a permit shall also comply with all applicable guidelines, including the Local Guidelines of District, adopted pursuant to the Environmental Quality Act of 1970, and shall make all deposits required and pay all fees which may be established by the District to process applications to comply with said Act. The plumber must have a copy of all necessary permits on the job when the building sewer is being constructed.

F. Plan Required

A plan showing the location of the proposed structure and location of the building sewer on the property shall be furnished to the District at the time the sewer connection permit is issued. The plan shall show the envelope of the building, all easements, and the depth and grade of the proposed building sewer. The District Inspector or District Engineer may require a survey by a registered land surveyor or engineer if it is necessary to ascertain the location of property lines or easements. The plumber must have this plan on the job when the building sewer is being constructed.

G. Inspection

All building sewers shall be inspected by the District Inspector prior to the backfilling and shall be tested for watertightness in the presence of the District Inspector. Inspections must be arranged twenty-four (24) hours before the work is to be inspected, Sundays and holidays excluded. District Office shall advise the owner or agent the approximate time inspection will be made. A surcharge of $50 per return inspection shall be charged for return inspections.

H. Location of Building Sewer

It is the responsibility of the property owner or his contractor to locate and uncover the building sewer or wye installed to serve the property. If no building sewer or wye can be found even though the District records indicate such a connection, the building sewer shall be connected to the District system at a location designated by the District Inspector or District Engineer at the expense of the permitee.

I. Main Line Taps

Special permission must be obtained from the District to make a tap or connection to the District's public sewer. Connection to a public sewer may be permitted only after field inspection of the condition by the District Inspector and a finding that no wye or building sewer was installed. Each connection when permitted shall be made only in the presence of and at the direction of the District Inspector. On 6-inch sewers, installation of a wye will be required; on larger pipes, a tap may by made using epoxy adhesive to seal the connection. A "Tap Tite" or equal pipe penetration type of connection on sewers larger than 6" may be used upon receiving permission in advance from the District Inspector or District Engineer.

J. Sewage Pumps

Special application must be made for installation of an individual sewage pumps where gravity service is not feasible. All pumping systems shall be installed in accordance with all applicable codes. The District will only inspect the pressure line from the sewage pump to the point of connection to the District sewer system.

K. Service to More Than One Dwelling

Service to more than one dwelling with a single sewer requires either special permission from the District or a separate public sewer main extension as set forth in the Sanitary Code of Richardson Bay Sanitary District.

II. DESIGN REQUIREMENTS

A. Pipe Size

The minimum size of a building sewer serving up to one hundred fifty (150) fixture units shall be 4" inside diameter. The minimum size of a building sewer serving more than one hundred fifty (150) fixture units shall conform to the size requirements for horizontal drainage piping based on fixture unit loading as given in the Uniform Plumbing Code. In no event shall a building sewer connect to a sewer of a lesser size on the downstream side.

B. Minimum Pipe Slope

The minimum grade of a building sewer shall be ¼-inch per foot (2.0%).

C. Minimum Pipe Cover

The minimum cover over the top of a building sewer shall be:

1. 18 inches within the owner's premises
2. 30 inches within an easement outside the owner's premises
3. 48 inches within a street right-of-way

Where the above minimum pipe covers cannot be obtained, special pipe bedding and/or concrete encasement may be required by the District Inspector or Engineer.

D. Gravity Sewers

The following are acceptable pipe and joint materials.

PIPE MATERIALS

14-01 Description. Sewer pipelines shall be installed as shown on the plans and in accordance with the following provisions, the Special Provisions, and as directed by the District.

14-02 Approved Sewer Pipe Materials. The approved pipe materials for laterals and for private side sewer/lateral construction are listed in Table 1 and approved pipe materials for public sewer mains and force mains are listed in Table 2. The specific use of pipe and pipe products are subject to approval by the District. Use of pipe other than those specified hereinbelow must be reviewed by the District and specifically authorized in writing. All pipe shall be of the size, materials, and strength classifications shown on the plans or specified herein.

TABLE 1
PRIVATE SIDE SEWER/LATERAL
(Specific Use Subject to District Approval)

* Pipe Specifications	Can Be Used for Gravity Sewers	Can Be Used for Ejector Pump Discharge Pipelines
Vitrified Clay Pipe (No Hub), VCP	Yes[1]	No
Cast Iron Soil Pipe (No Hub), CIP	Yes[2]	No
Ductile Iron Pipe w/Rubber Ring Joints, DIP	Yes[2]	No
PVC ASTM D-2241, SDR=26	Yes[1]	Yes[1]
PVC AWWA C-900, SDR=21	Yes[2]	Yes[2]
PVC Sch 40	Yes[1]	Yes[1]
PVC Sch 80	Yes[2]	Yes[2]
Polyethylene, min SDR=17	Yes[1]	Yes[1]

[1] Requires minimum 3-foot cover with imported bedding and pipe zone backfill.
[2] Requires minimum 18-inch cover on private property with imported bedding and pipe zone backfill or shaded with select native material containing rocks no larger than 1" sieve size.

* Pipe Specifications can depend on terrain and soil conditions.

Pressure Sewers

The pressure portion of the discharge line shall be equal in size to the pump discharge. The pipe shall have a working pressure rating not less than 150 psi. The test pressure shall be 50 psi.

III. CONSTRUCTION

A. Laying Pipe

Building sewers shall be laid by the shortest route from the plumbing outlet to the sewer connection. All pipe shall be laid accurately to line and grade. Each length of pipe shall be laid on a firm bed as detailed in Drawing No. 1 and shall have full bearing for its entire length between bells. An adequate bell hole shall be dug at the end of each pipe length for making the joint. Both bell and spigot shall be clean before the joint is made and care shall be taken that no foreign materials enters the pipe. Water shall be pumped from the trench while the pipes are laid and the joints made. Backfill shall be carefully and uniformly placed around the pipe, and no rocks or clods allowed to touch the pipe. In rocky areas imported bedding material may be required. Pipe shall not be covered until inspected by the District Inspector.

B. Cleanouts

Cleanouts shall be installed at the following locations:

1. A tee or wye fitting shall be installed at the junction of the building sewer at property line. This fitting shall be used for inserting test plug after which it shall be permanently sealed, unless otherwise required.

2. At the junction of the house plumbing and building sewer two (2) feet outside the building.

3. At each bend or change in direction of the building sewer 22-1/2° or over.

4. Where a run of pipe without bends exceeds one hundred (100) feet.

Note: Cleanouts shall be brought to grade, properly capped, and completely watertight.

C. Backwater Valves

The District requires the installation of an approved backwater device. The approved backwater device shall be installed as detailed in Drawing No. 2. The elevation of the backwater valve rim shall be at least twelve (12) inches below the lowest plumbing fixtures. If the building does not have an approved backwater device installed, one shall be installed as a required condition for the issuance of a permit by the District.

D. Testing of Gravity Sewers

All building sewers shall be tested by plugging and filling with water or with compressed air to five (5) psi, as directed by the District Inspector or Engineer. Water leakage shall not exceed one hundred (100) gallons per day per inch of diameter per mile of sewer main being tested (0.3 gallons per hour per 100 feet of 4-inch diameter pipe). When an air test is made, the pressure must not dip over a fifteen (15) minute test period.

E. Testing of Pressure Sewers

Pressure sewers shall be tested under a water pressure not less than the working pressure under which it is used. A one hundred (100) pounds per square inch air pressure may be substituted for the water test. In either method, the piping shall withstand the test without leaking for a period of not less than fifteen (15) minutes.

F. Existing Septic Tanks

When an existing septic tank is being abandoned or when one is encountered during the work, the following procedures should be followed:

1. All building sewers shall completely bypass the septic tank.

2. All septic tanks shall be pumped out and cleaned.

3. All septic tanks shall be filled with crushed rock or pea gravel or otherwise made safe.

4. All septic tanks shall be abandoned per the Uniform Plumbing Code and County Health Department regulations.

The County Health Department shall be notified when a septic tank is being abandoned or is encountered. The County Health Department's standards must also be followed.

G. Trenches for Building Sewers Excavated and Backfilled

Trenches for building sewers within public streets shall be excavated and backfilled and the pavement restored in strict accordance with the laws, ordinances and regulations of the State of California, County of Marin, Town of Tiburon, or any department, authority or agency or either having jurisdiction over such street.

H. Special Conditions

When special construction conditions are encountered which are not covered in these specifications, the District Inspector or Engineer will direct the permitee in the required procedures.

I. Permit Expiration

If work under a permit is not completed within one (1) year from the date of isssuance, after partial completion, the permit shall thereupon become void and the fee paid shall be returned to permitee, less a $100 service charge to be retained by the District. Further work shall not be done until a new permit has been secured and a new permit fee paid.

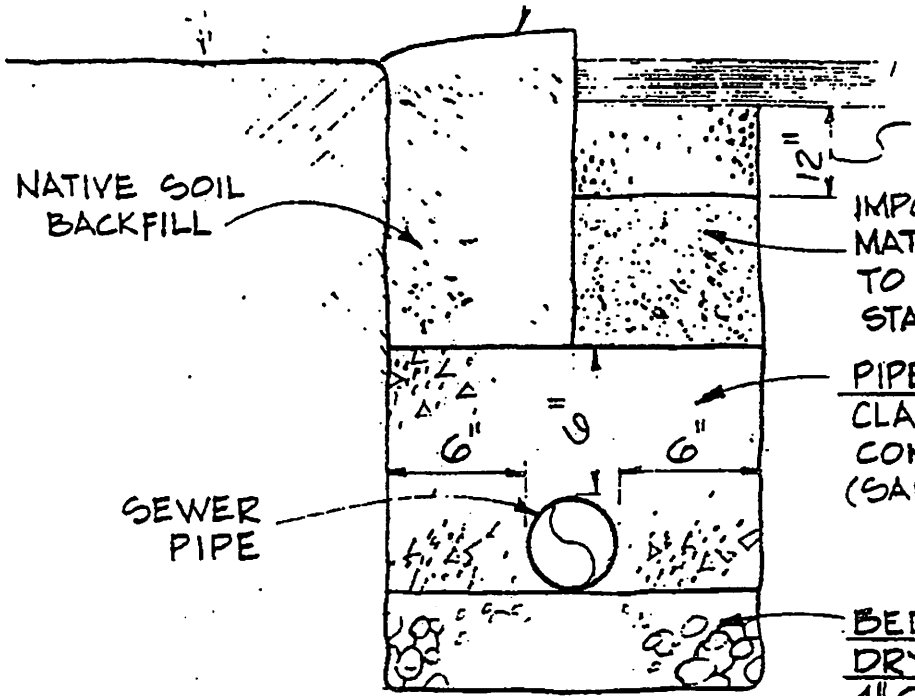
J. Permits are Non-Transferable

Permits issued by the District shall be for the property for which the permit was issued and shall not be transferred to another property without written approval of the Sanitary District Board. The permit shall show the name of the permitee and shall identify the property by Assessor's Parcel Number.

ON PRIVATE PROPERTY OR IN EASEMENTS

IN PUBLIC RIGHT OF WAY CONFORM TO CITY/COUNTY STANDARDS FOR SURFACE RESTORATION - DWG. 991

MOUND EARTH OVER TRENCH



CLASS 2 AGG BASE COMPACT TO 95%

IMPORTED GRANULAR MATERIAL - COMPACT TO 90% - SEE CITY/COUNTY STANDARDS DWG 991

PIPE ZONE BACKFILL
CLASS 2 AGG. BASE COMPACT TO 90% (SAND NOT PERMITTED)

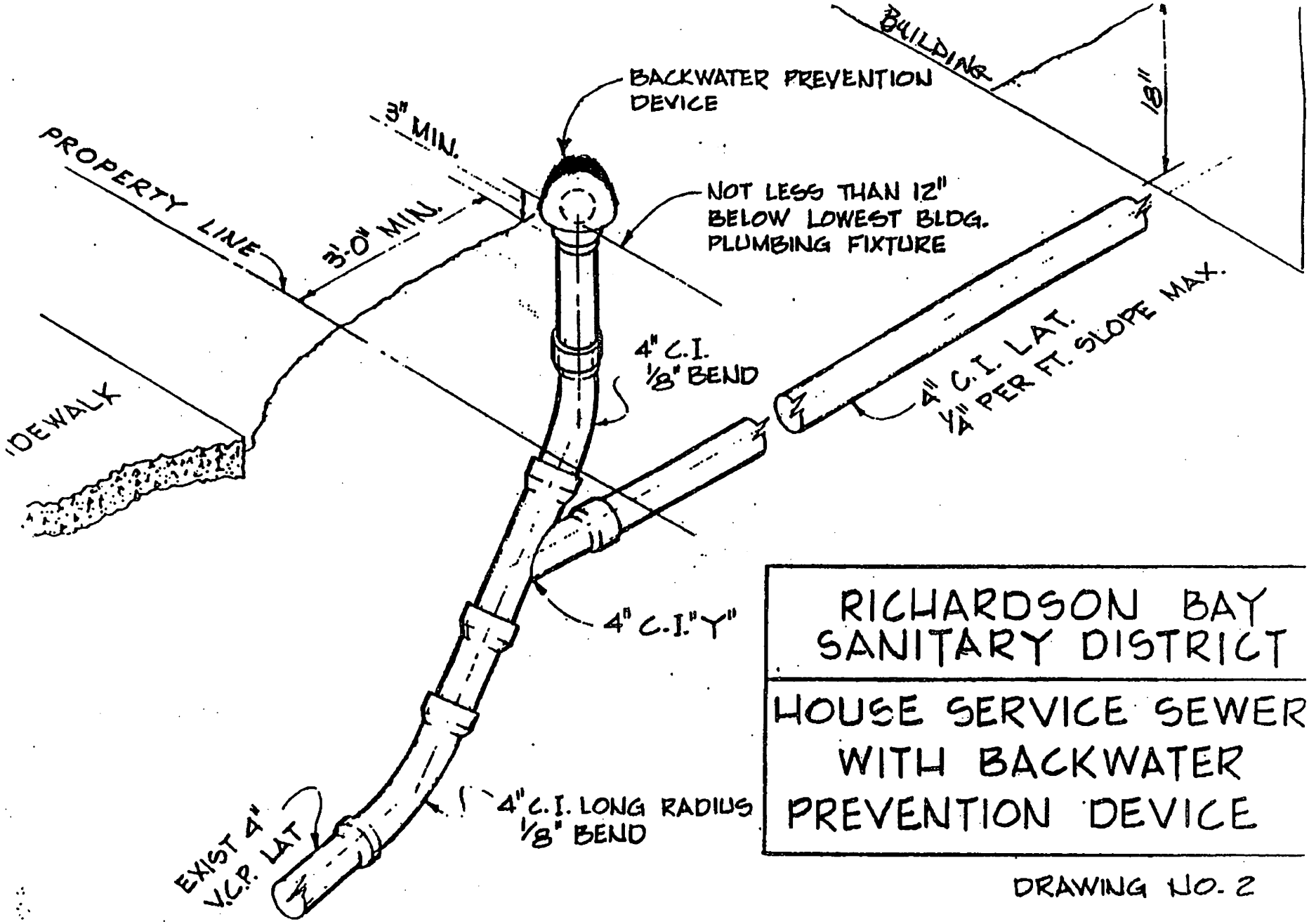
BEDDING
DRY CONDITIONS - USE 4" CLASS 2 AGG BASE
WET CONDITIONS - USE 8" OF 1½" CRUSHED ROCK

BEDDING DETAIL

NOT TO SCALE

RICHARDSON BAY SANITARY DISTRICT
STANDARD PIPE BEDDING DETAIL

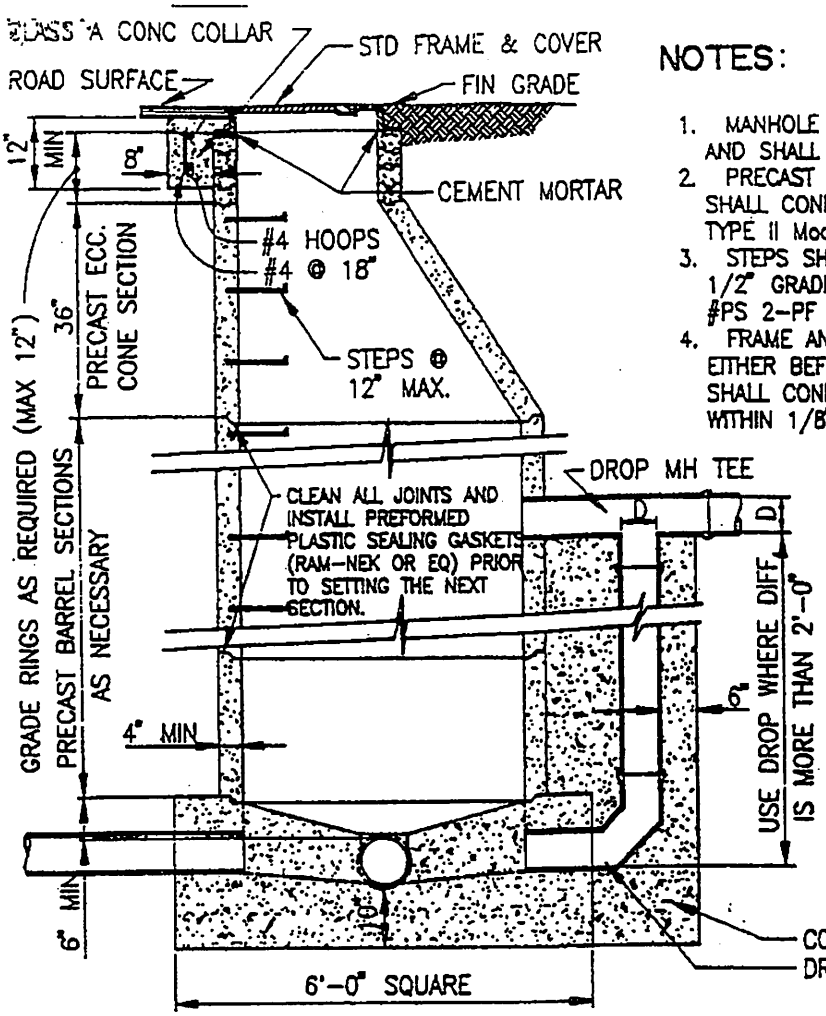
DRAWING NO. 1



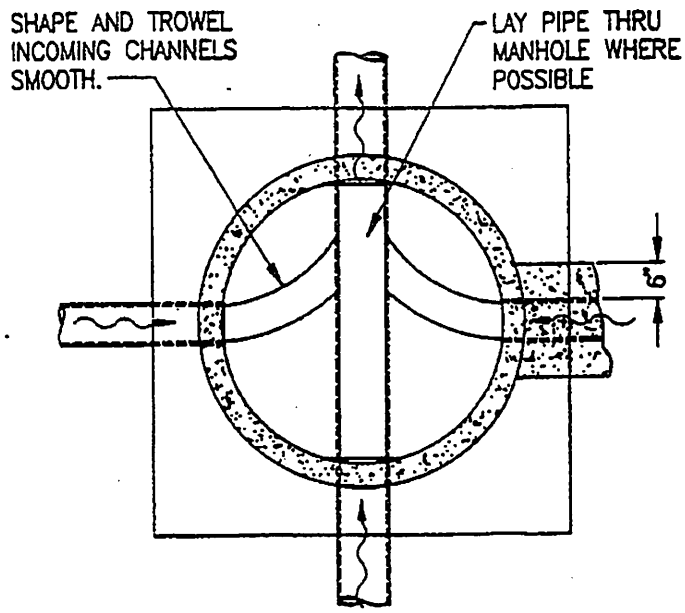
RICHARDSON BAY SANITARY DISTRICT

HOUSE SERVICE SEWER WITH BACKWATER PREVENTION DEVICE

DRAWING NO. 2



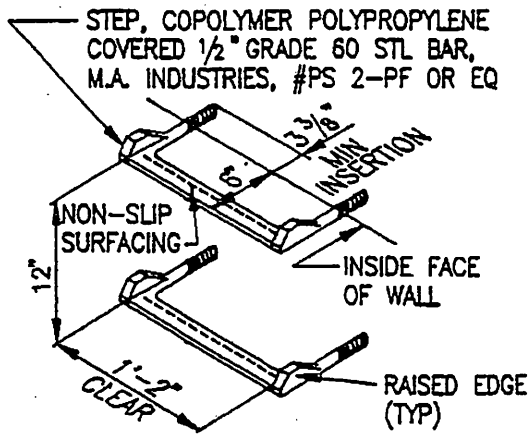
SECTION



PLAN OF BOTTOM

NOTES:

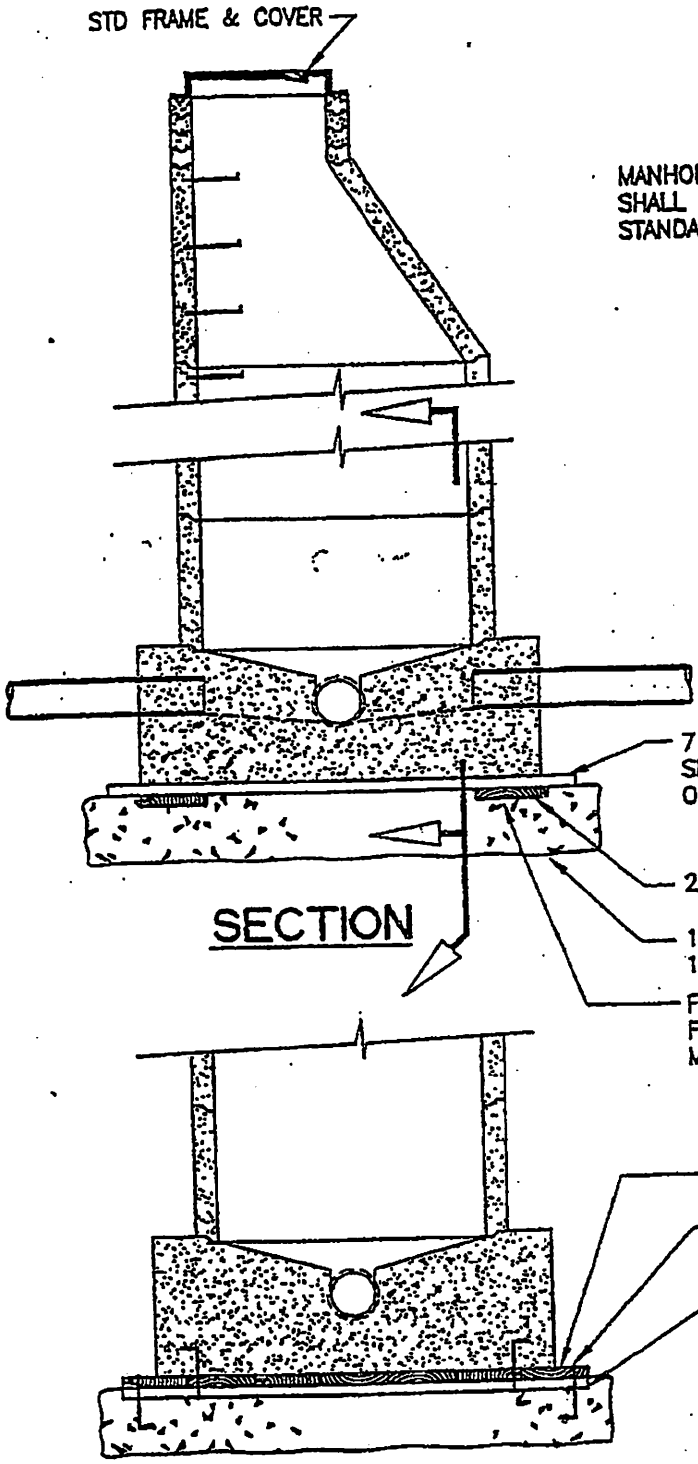
1. MANHOLE BASE SHALL BE CLASS A (6-sack) CONCRETE AND SHALL BE POURED AGAINST UNDISTURBED SOIL.
2. PRECAST CONCRETE CONE, BARREL AND GRADE RINGS SHALL CONFORM TO A.S.T.M. Spec C-478, EXCEPT THAT TYPE II Modified PORTLAND CEMENT SHALL BE USED.
3. STEPS SHALL BE POLYPROPYLENE REINFORCED WITH 1/2" GRADE 60 STEEL BAR AS DETAILED BELOW, #PS 2-PF AS MANUFACTURED BY M.A. INDUSTRIES OR EQ.
4. FRAME AND COVER MAY BE ADJUSTED TO GRADE LEVEL EITHER BEFORE OR AFTER PAVING, BUT FINAL GRADE SHALL CONFORM TO ADJACENT FINISH PAVEMENT GRADE WITHIN 1/8".
5. ECCENTRIC CONE SECTION SHALL BE POSITIONED AS DIRECTED BY THE DISTRICT.
6. WHERE FRAME AND COVER IS SET AFTER PAVING, THE CONCRETE COLLAR SHALL BE BROUGHT TO FINISH GRADE AND THE EXPOSED CONCRETE SURFACE SHALL BE COLORED WITH LAMPBLACK.
7. RECESS IN MANHOLE BASE SHALL BE FORMED WITH AN APPROVED METAL FORMING RING TO RECEIVE PRECAST MANHOLE JOINT. PREFORMED PLASTIC SEAL GASKET SHALL BE INSTALLED BEFORE PLACING FIRST BARREL SECTION.
8. PRECAST MANHOLE BASES ARE NOT ALLOWED.



MANHOLE STEPS

RICHARDSON BAY SANITARY DISTRICT
500 TIBURON BOULEVARD
TIBURON, CA 94920

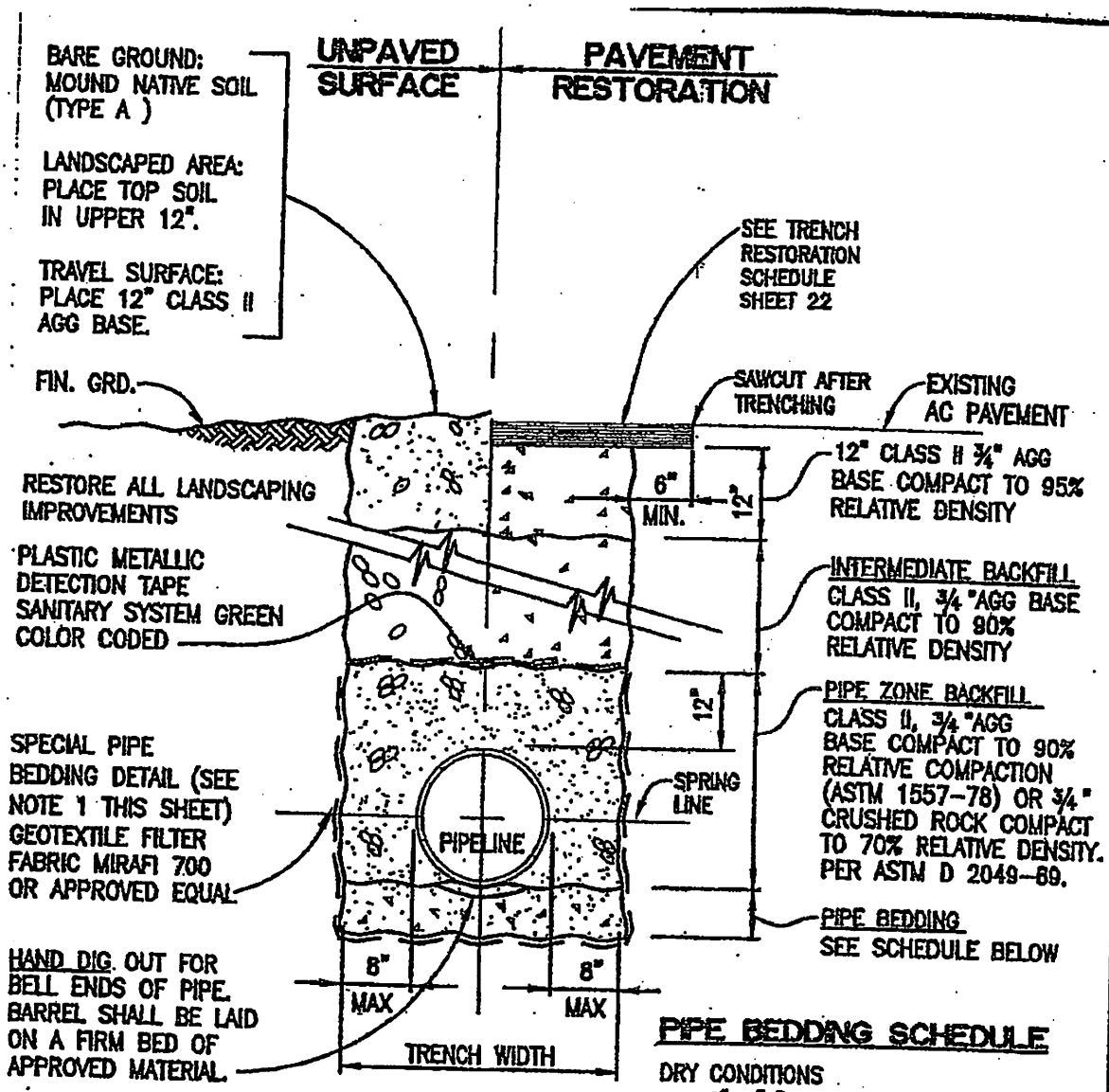
STANDARD DROP MANHOLE



RICHARDSON BAY SANITARY DISTRICT
100 TIBURON BOULEVARD
TIBURON, CA 94920
MARIN COUNTY, CALIFORNIA

MANHOLE BASE IN BAY MUD

1996		SD 2.3



PIPE BEDDING SCHEDULE

DRY CONDITIONS
6"– ¾"CRUSHED ROCK

WET CONDITIONS AND BAY MUD CONDITIONS
12"– ¾" CRUSHED ROCK

NOTES:

1. COMPACT ALL CRUSHED ROCK TO 70% RELATIVE DENSITY PER ASTM D 2049
2. WHERE A ROAD GRIND IS SPECIFIED THE TOTAL AC THICKNESS OVER THE TRENCH SHALL BE 4"
3. CONSULT LOCAL JURISDICTION FOR ASPHALT CUTTING REQUIREMENTS.

RICHARDSON BAY SANITARY DISTRICT
500 TIBURON BOULEVARD
TIBURON, CA 94920
Marin County, California

TYPICAL TRENCH SECTION

2005		SD-4.1

HOMESTEAD VALLEYSANITARY DISTRICT
District Manager
Bonner Beuhler
(415) 388-4796 OFFICE, 415) 725-7852 CELL

FOR DISTRICT USE ONLY

PERMIT NO: _____
PERMIT FEE: $_____
APPLICATION DATE: _____
EXPIRATION DATE: _____

PERMIT APPLICATION
PRIVATE SEWER LATERAL
LATERAL INSPECTION REVIEW – CONSTRUCTION – REPAIR – REPLACEMENT

NAME: FIRST & LAST (PROPERTY OWNER) _____
ADDRESS _____
CROSS STREET _____
PHONE _____ CELL _____ FAX _____

APPLICANT, IF DIFFERENT THAN ABOVE (Plumber or Contractor)
APPLICANT NAME _____
ADDRESS _____
PHONE _____ CELL _____ FAX _____

LOCATION OF WORK ☐PUBLIC RIGHT OF WAY*
☐EASEMENT/PRIVATE PROPERTY

NATURE OF WORK ☐ PRIVATE LATERAL INSPECTION REVIEW
☐ REPAIR OR REPLACEMENT OF PRIVATE LATERAL
☐ NEW CONSTRUCTION OF PRIVATE LATERAL

I AGREE TO THE FOLLOWING:
Will submit written Repair Proposal with drawings
Will not start work without approval of Repair Proposal
Will have the bedding ½ way up pipe with bands and pipe joints exposed for District review before backfilling
Will have all pipes connected and cleanout(s) installed (where applicable)
Will contact District representative Bonner Beuhler (415) 388-4796 Office or (415) 725-7852 cell at least one (1) business days in advance of site inspections to confirm inspections times.
New or complete replacement laterals must be water or air tested with District Representative present (see Approved Repair Proposal)

DATE WORK SCHEDULED TO START _____

APPLICANT SIGNATURE _____ DATE _____

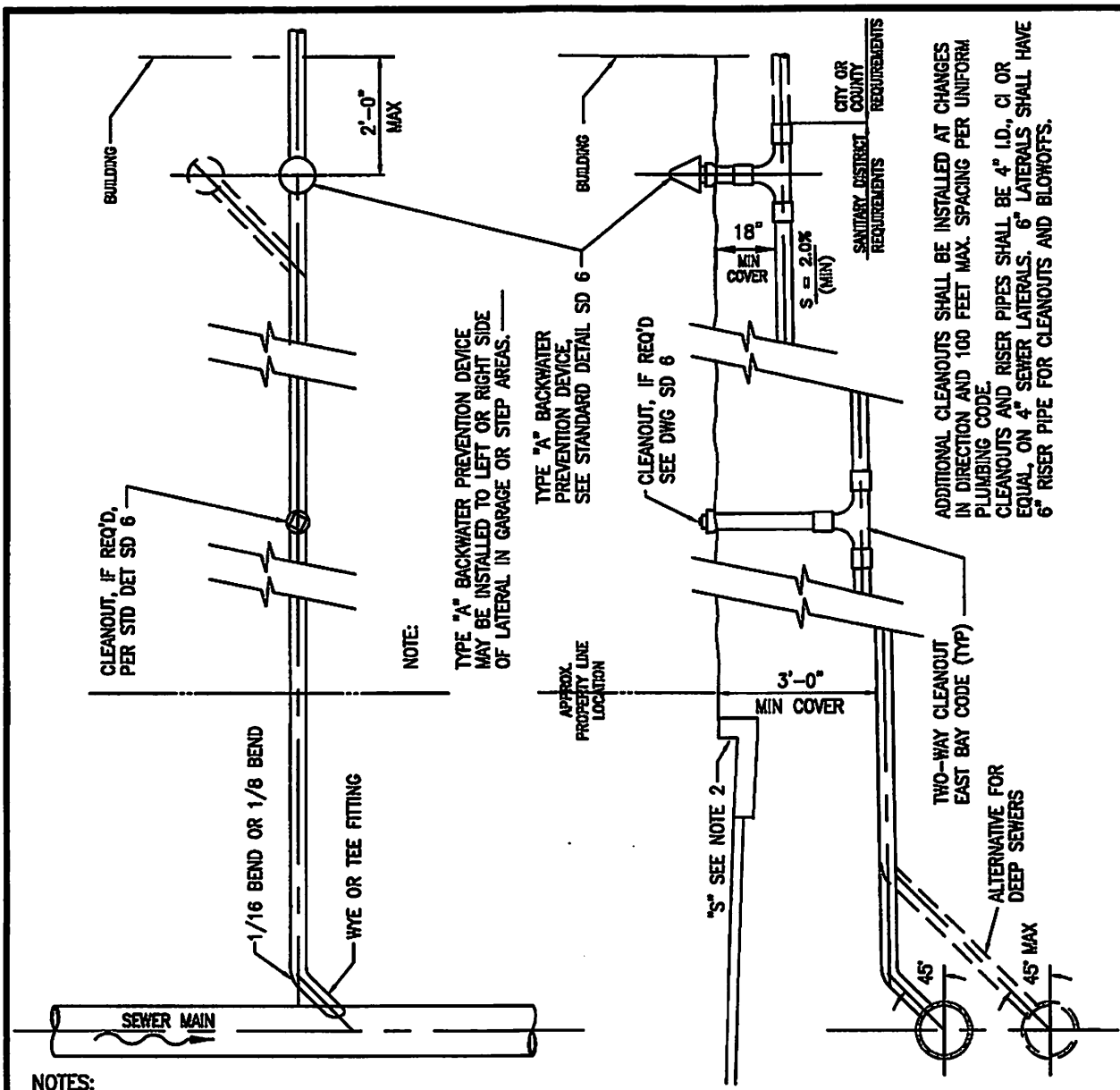
*If the work proposed is in the Public Right of Way a County of Marin or City of Mill Valley Encroachment Permit is required.

FOR DISTRICT USE ONLY:

REPAIR PROPOSAL APPROVAL DATE _____ REVIEWED BY _____
DATE INSPECTED _____ INSPECTED BY _____
TEST (AIR OR WATER)_____ CCTV OF REPAIR _____

Existing Pipe Material _____ Repair Pipe Material _____
Length of Lateral_____ Distance from Left Property Corner _____
Repair Length _____ Connection Type (At Main) _____
Upstream MH _____ Downstream MH _____
Overflow (Contra Costa Valve) Required ☐Yes ☐No Backflow (Check Valve) Required: ☐Yes ☐No

COMMENTS:
_____
_____
_____



NOTES:

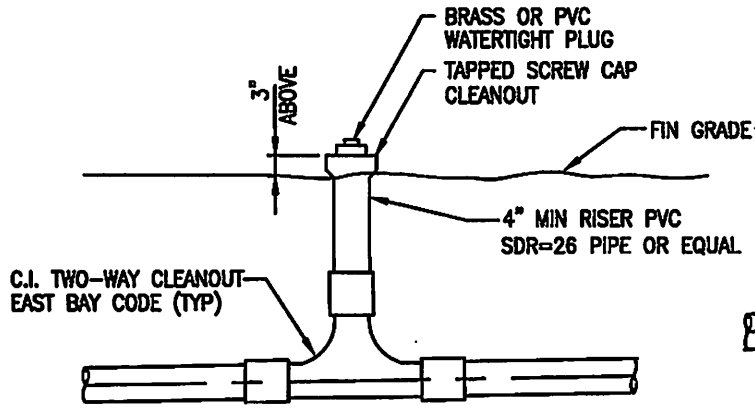
1. WHEN A LATERAL SEWER IS INSTALLED IN ADVANCE OF THE BUILDING SEWER, IT SHALL BE TERMINATED AT OR NEAR THE PROPERTY LINE. THE END OF THE LATERAL SHALL BE MARKED WITH A 4" x 4" REDWOOD STAKE, PAINTED GREEN, FROM THE TOP OF THE PIPE TO A MINIMUM OF 6" ABOVE THE FINISHED GROUND SURFACE.
2. WHERE CONCRETE CURBS AND GUTTERS EXIST OR ARE TO BE A PART OF AN IMPROVEMENT, EACH SIDE SEWER SHALL BE PERMANENTLY LOCATED BY IMPRINTING OR CHISELING AN "S" (3" size) IN THE FACE OF THE CURB VERTICALLY ABOVE THE SEWER PIPE.
3. BACKFILL SHALL NOT BE PLACED UNTIL PIPE INSTALLATION HAS BEEN INSPECTED AND APPROVED BY THE DISTRICT.
4. TYPE A BACKWATER PREVENTION DEVICE (CONTRA COSTA RELIEF VALVE, ALSO KNOWN AS MUSHROOM CAP) SHALL BE INSTALLED ON A 4" MINIMUM RISER PIPE NOT MORE THAN 3' FROM BUILDING WALL, PER STANDARD DETAIL SD6.
5. LATERAL TRENCHES IN AREA OF PUBLIC STREET CURB, GUTTER AND SIDEWALK SHALL BE COMPACTED THE SAME AS TYPICAL TRENCH DETAIL SD 4. AREAS AROUND NEW CONCRETE CLEAN-OUT BOXES SHALL BE SOILS TESTED TO 90% COMPACTED. CONTRACTOR IS TO USE WHATEVER MEANS NECESSARY TO ACHIEVE 90% COMPACTION.
6. CLEANOUT MAY BE PLACED IN A BOX AS LOCATION REQUIRES.

HOMESTEAD VALLEY SANITARY DISTRICT

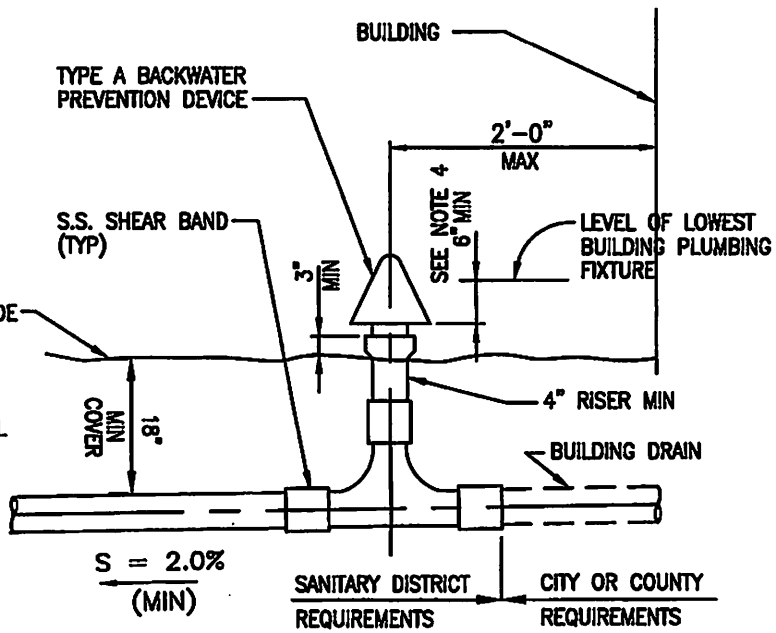
TYPICAL SIDE SEWER DETAILS

2012		SD 5

CLEANOUTS LOCATED UNDER PAVED DRIVEWAYS, WALKWAYS, ETC. SHALL BE RAISED TO GRADE AND INSTALLED IN PRECAST CONC METER BOXES FLUSH FITTED TO PAVING W/ GALVANIZED STEEL CHECKERED PLATE TRAFFIC LIDS MARKED "SEWER", CHRISTY B9 W/ 61D15 LID, OR EQUAL, AS DIRECTED BY THE DISTRICT.



STANDARD CLEANOUT



TYPE A BACKWATER PREVENTION DEVICE

NOTES:

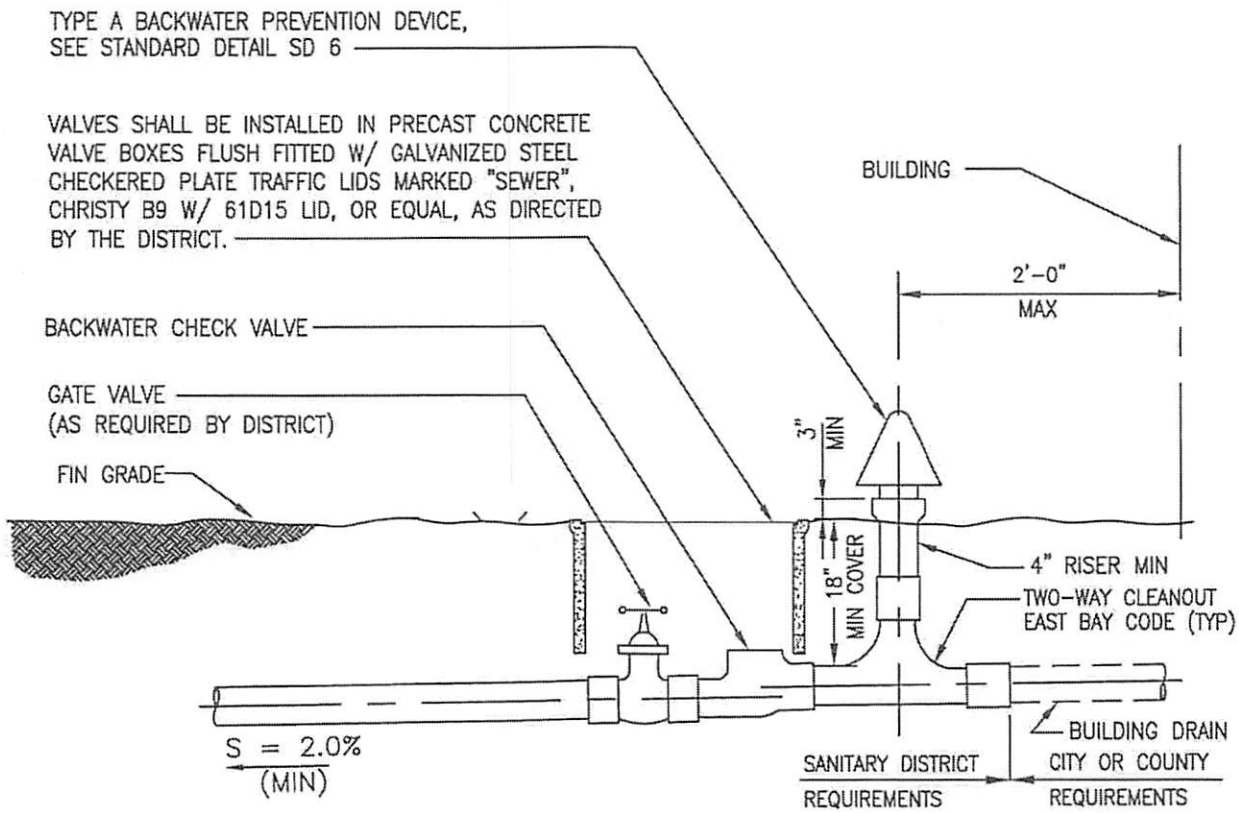
1. A STANDARD 4" C.I. CLEANOUT IS THE MINIMUM DISTRICT REQUIREMENT.
2. A BACKWATER PREVENTION DEVICE IS REQUIRED AND SHALL BE INSTALLED ON ALL SIDE SEWERS.
3. A TYPE "A" BACKWATER PREVENTION DEVICE SHALL BE INSTALLED IN A LOCATION WHERE SEWAGE CAN OVERFLOW ON THE SURROUNDING AREA WITHOUT DAMAGE TO PROPERTY.
4. IF THE DIFFERENCE IN ELEVATION OF THE LOWEST FIXTURE AND THE TYPE "A" BACKWATER PREVENTION DEVICE IS LESS THAN SIX (6) INCHES, A BACKWATER CHECK VALVE SHALL BE INSTALLED AS SHOWN IN STANDARD DETAIL SD 7.

HOMESTEAD VALLEY SANITARY DISTRICT

STANDARD CLEANOUT AND BACKWATER PREVENTION DEVICE

2012

SD 6



HOMESTEAD VALLEY SANITARY DISTRICT

BACKWATER CHECK VALVE AND SHUTOFF SYSTEM

2012		SD 7

HOMESTEAD VALLEY SANITARY DISTRICT

P.O. BOX 149, MILL VALLEY, CALIFORNIA 94942 (415) 388-4796

CONNECTION FEE WORKSHEET

FOR ADDITIONS TO EXISTING RESIDENCES

ADDRESS _____ A.P. NO. ____ - ____ - ____

OWNER _____ CONTRACTOR _____

ADDRESS _____ ADDRESS _____

_____ _____

PHONE NO. _____ PHONE NO. _____

DESCRIPTION _____

_____

_____

TYPE OF FIXTURE	COUNT	FIXTURE UNITS/EA.	EXTENSION
BAR SINK		1	
BATHTUB		2	
BIDET		2	
DISHWASHER		2	
LAUNDRY		2	
LAVATORY		1	
SHOWER		2	
SINK		2	
TOILET		3	
OTHER			

TOTAL FIXTURE UNITS: _____

ADMINISTRATION/INSPECTION: $200.00

ADDITIONAL FIXTURE UNITS @ $200/EA.=_____ X $200 = _____

CONNECTION FEE :_____

PREPARED BY _____

DATE _____

APPENDIX D

Capacity Assessment Study

Section 4 Capacity Assessment

4.1 Introduction

4.1.1 Purpose

This portion of the SSRAP submittal presents the results of the collection system capacity assessment to comply with subsection IV.B.3 of the Order. This subsection of the Order requires that the agencies identify areas, sources, and quantities of infiltration/inflow (I/I) in the collection system; identify bottlenecks to conveying wet weather flows; and discuss the impact of flows from one agency to another and on SASM's wastewater treatment plant (WWTP).

This capacity assessment for SASM and its member agencies is based on flow monitoring data obtained during the 2008/09 and 2009/10 wet weather seasons and hydraulic modeling of the SASM conveyance system and key portions of the member agency collection systems. The capacity assessment has been used to develop a Capacity Assurance Plan as required under Section V.B of the Order (see Section 5 of this report) and to complete the Pump Station Reliability Certification for Peak Wet Weather Flows as required under Section III.C of the Order (see Section 2 of this report).

4.1.2 Requirements of the EPA Amended Order for Compliance

The EPA Order, Section IV.B includes the following requirements:

IV. COLLECTION SYSTEM ASSESSMENTS

B. Capacity Assessment:

1. *By October 15, 2008, SASM and the member agencies each shall install flow meters to identify average and peak dry and wet weather flow rates generated from the overall service area for each agency. The flow meters shall be capable of measuring a full range of flows, including peak flows under surcharge conditions. An agency may use temporary flow meters to fulfill these requirements.*
2. *By October 15, 2009, and each year thereafter, SASM and the member agencies shall each submit a report to EPA providing the results of collection system flow monitoring, including average dry weather flow and peak wet weather flow from each of the member agency collection system.*
3. *By October 15, 2010, SASM and the member agencies each shall complete an assessment and submit a report to EPA on collection system flows and hydraulic capacity. The assessments shall include flow measurements, visual observations of flow levels and predictive flow modeling as needed to complete a report that:*
    a) *Identifies areas, sources and quantities of significant inflow to the sewage collection system;*
    b) *Identifies areas, sources and quantities of significant infiltration to the sewage collection system;*
    c) *Identifies any bottlenecks in the collection system which lack sufficient capacity to convey sewage flows through the collection system and to the Sewerage Agency of Southern Marin Wastewater Treatment Plant during wet weather; and*
    d) *Provides a discussion of the impact of wet weather flow from one agency to another as well as the impact on the Sewerage Agency of Southern Marin Wastewater Treatment Plant.*

4.2 Current and Previous Flow Monitoring

Flows in the SASM system are measured by permanent meters located at four of the SASM wastewater pump stations (Rosemont, Ricardo Road, Saltworks, and Trestle Glen) and at the SASM WWTP. A temporary wet weather flow monitoring program was conducted during the 2008/09 wet weather season in compliance with subsection IV.B.1 of the Order, and the results were summarized in the Annual Report on Flow Monitoring submitted to the EPA in October 2009. A more limited flow monitoring program was also conducted by SASM in the 2009/10 wet weather season to supplement and further confirm the data collected in 2008/09. The results of the 2009/10 flow monitoring are summarized in the Annual Report on Flow Monitoring (October 2010) submitted concurrently with this document. The flow monitoring results from both programs have been used to conduct the capacity assessment presented in this section.

4.3 Hydraulic Model

The modeling conducted for this capacity assessment utilized InfoWorks CS™, a fully dynamic hydraulic modeling software program that has also been used for modeling of the Sausalito-Marin City Sanitary District system.

The hydraulic model consists of a representation of the SASM conveyance system and key trunk sewers in the Mill Valley, HVSD, and RBSD collection systems, plus the sewer "subbasins" (called "subcatchments" in InfoWorks) that represent the flow from unmodeled sewers in the member agency collection systems that discharge to modeled sewers. Specifically, the modeled network includes all SASM gravity sewers, pump stations, and force mains; major gravity trunk sewers (typically 10-inch and larger) in the HVSD, Mill Valley, and RBSD collection systems (other agency collection systems include smaller diameter pipes only); and the four largest pump stations and associated force mains in the RBSD system. **Figure 4-1** shows the modeled SASM conveyance system and flow monitoring sites, modeled member agency trunk sewers and pump stations, and the member agency service areas.

As part of the development of the 2008/09 flow monitoring program, collection system maps available in GIS format were used to delineate sewer subbasins. Sewer subbasins define areas within each agency's collection system that typically drain to a common point or several points in close proximity on SASM pipelines or member agency trunk sewers. **Figure 4-2 through Figure 4-6** show the delineation of sewer subbasins and the wet weather flow monitoring sites for each of the agencies. A total of 36 flow monitoring sites, including permanent pump station sites, were included in the 2008/09 program; and 10 sites, including permanent pump station sites, were included in the 2009/10 program. **Figure 4-7** shows an overall schematic diagram of the SASM system and subbasins.

Data on the physical configuration of the modeled facilities were derived from maps and available record drawings and other information about the system. For each pipe, the model includes the pipe length, diameter, and upstream and downstream invert elevations, and default values for pipe friction factor and headloss coefficients. For each manhole, the model includes the manhole diameter and rim elevation. Physical dimensions are also included for overflow weirs and pump station wet wells. Additional information for modeling of the pump stations was obtained from available pump manufacturer's information, pump curves, and actual operating data (e.g., pump set points and drawdown test results).

The model computes the flow hydrographs from each sewer subbasin based on parameters that define its wastewater flow components (discussed in next section), and routes those hydrographs through the modeled system. Any capacity deficiencies in the system can be identified through the model results as areas of the system in which the model predicts significant pipe surcharge or potential overflows, or flows in excess of the rated capacity of modeled pump stations.

Figure 4-1: SASM Modeled Conveyance System, Member Agency Service Areas, and Flow Monitoring Sites

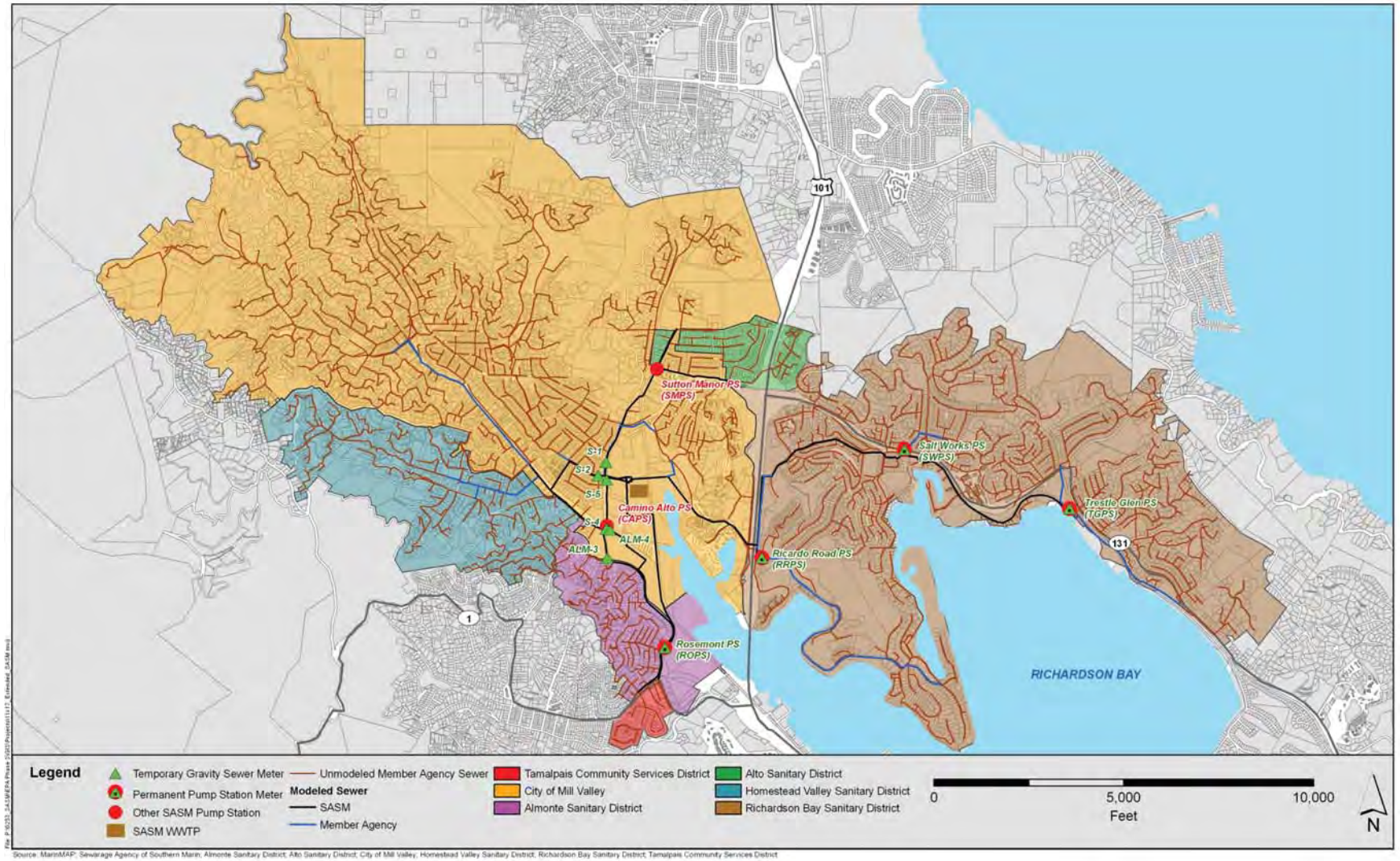


Figure 4-2: TCSD and Almonte Sewer Subbasins and Flow Monitoring Sites

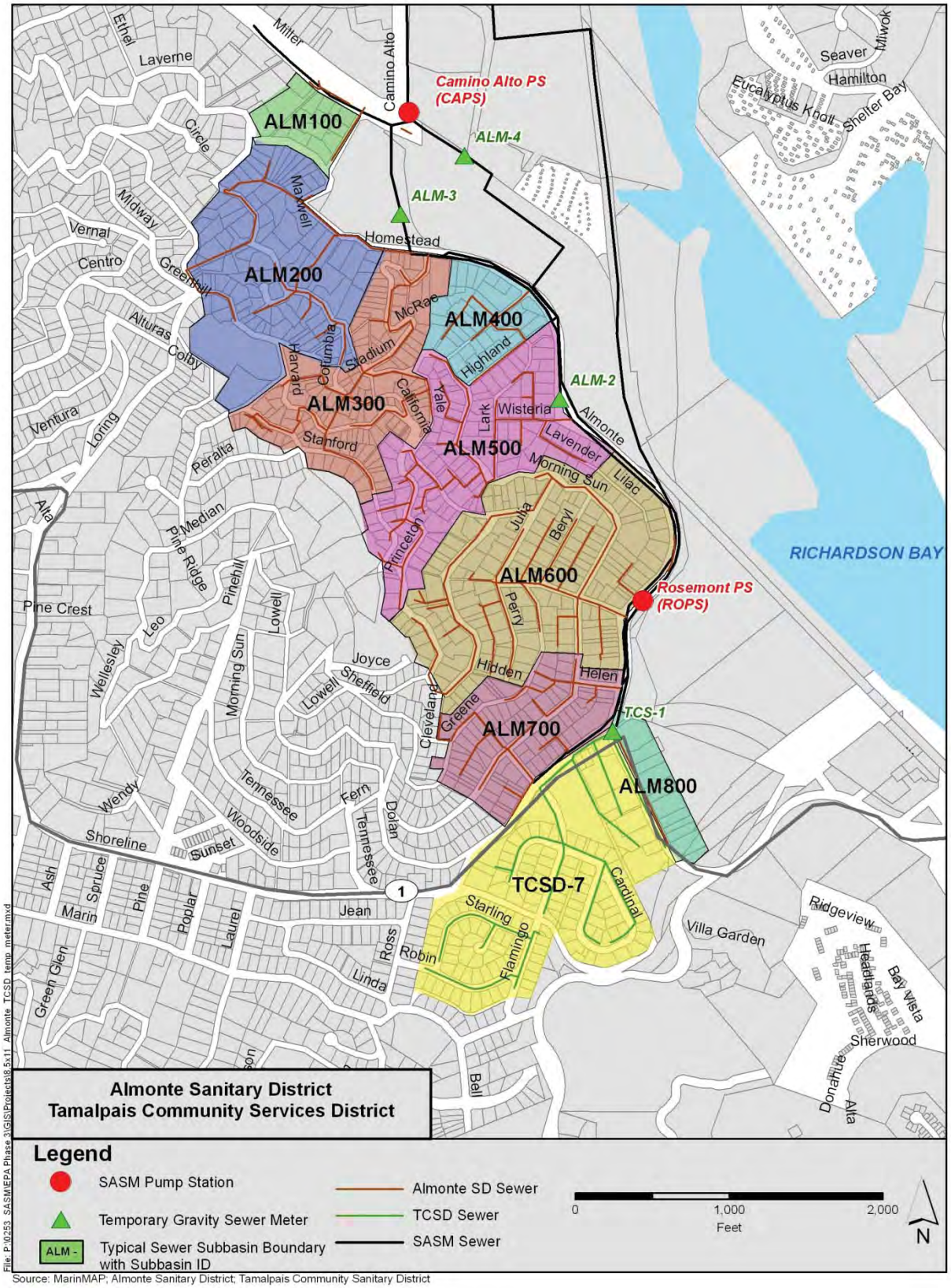


Figure 4-3: HVSD Sewer Subbasins and Flow Monitoring Sites

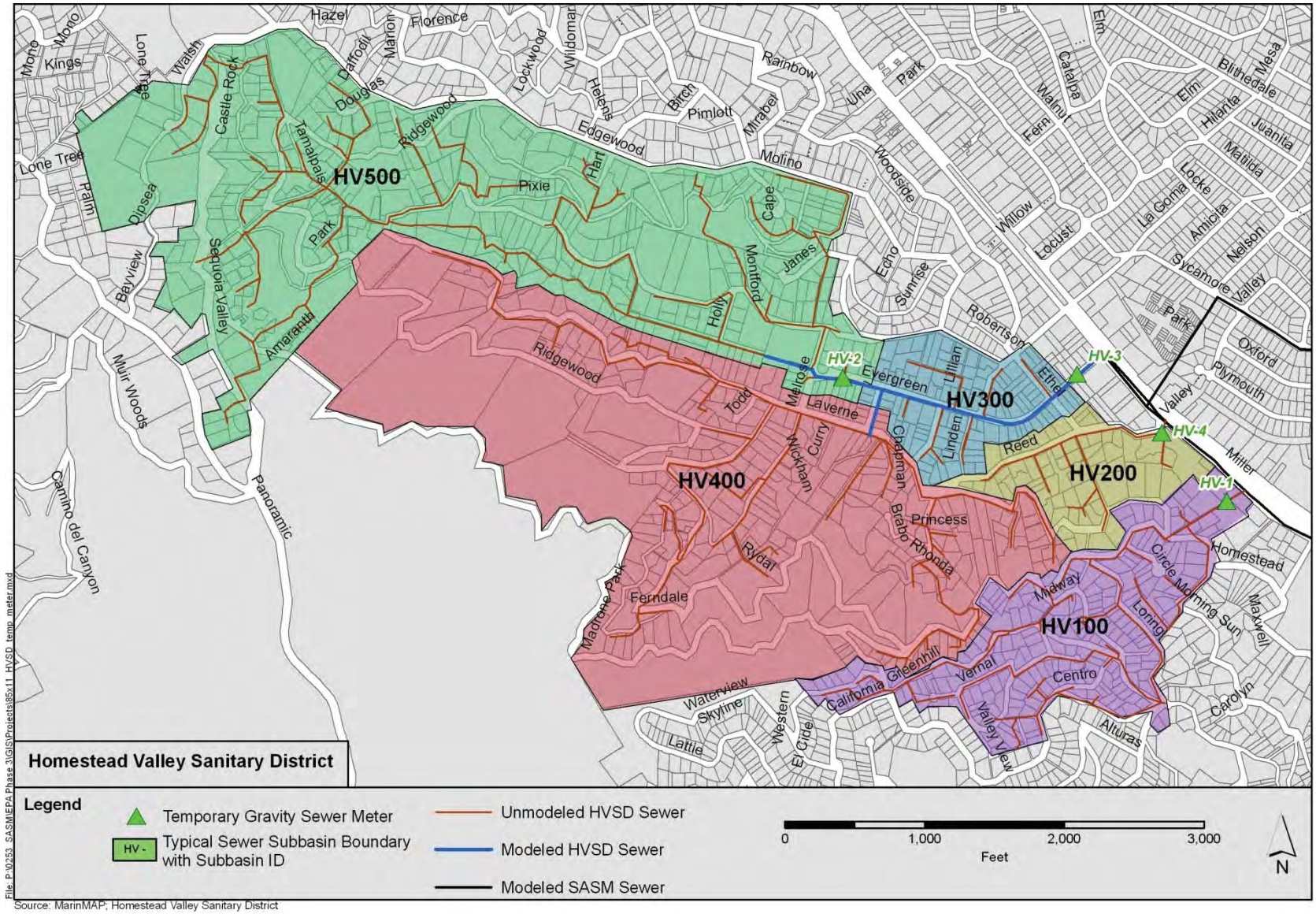


Figure 4-4: Mill Valley Sewer Subbasins and Flow Monitoring Sites

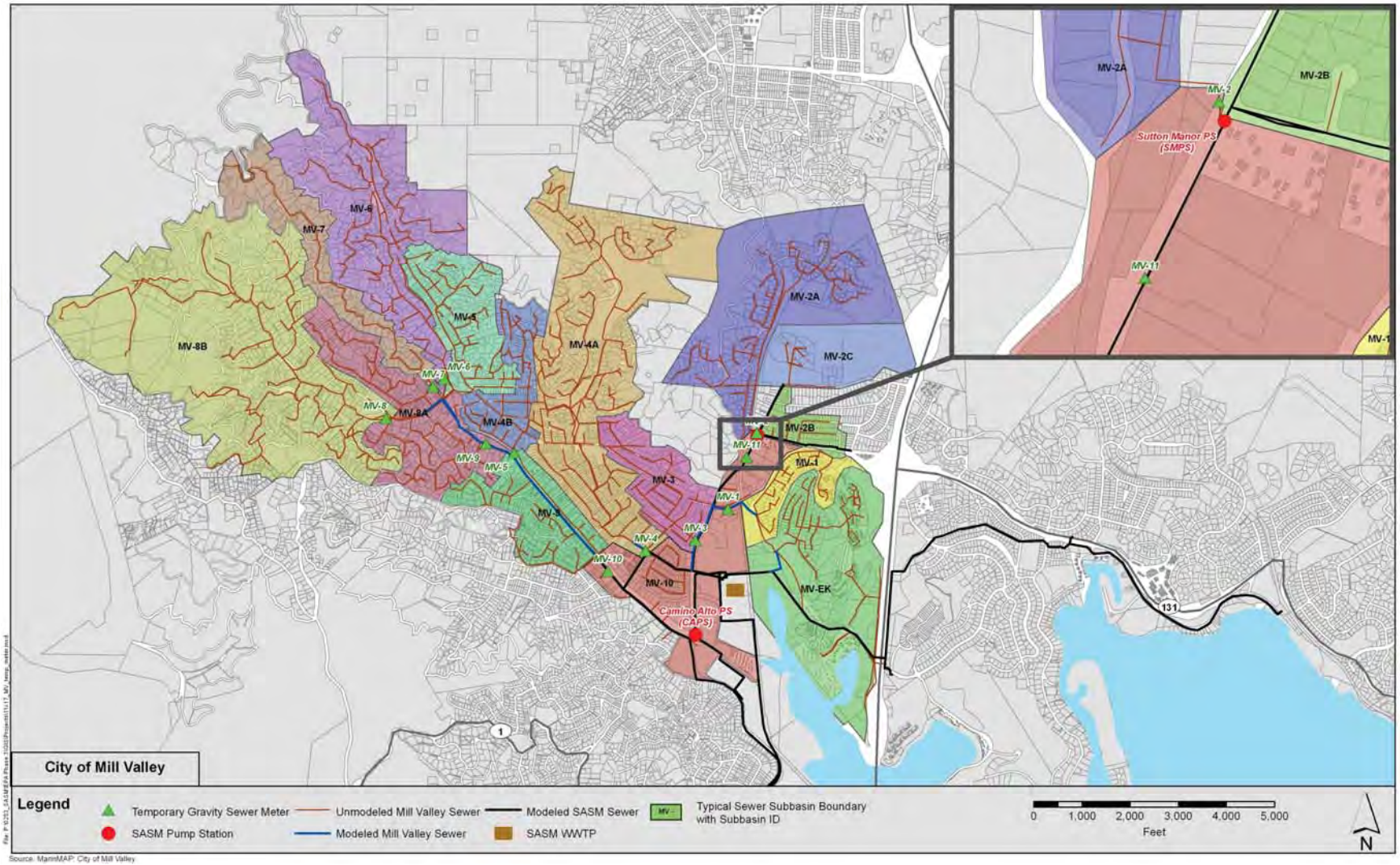


Figure 4-5: Alto Sewer Subbasins and Flow Monitoring Sites

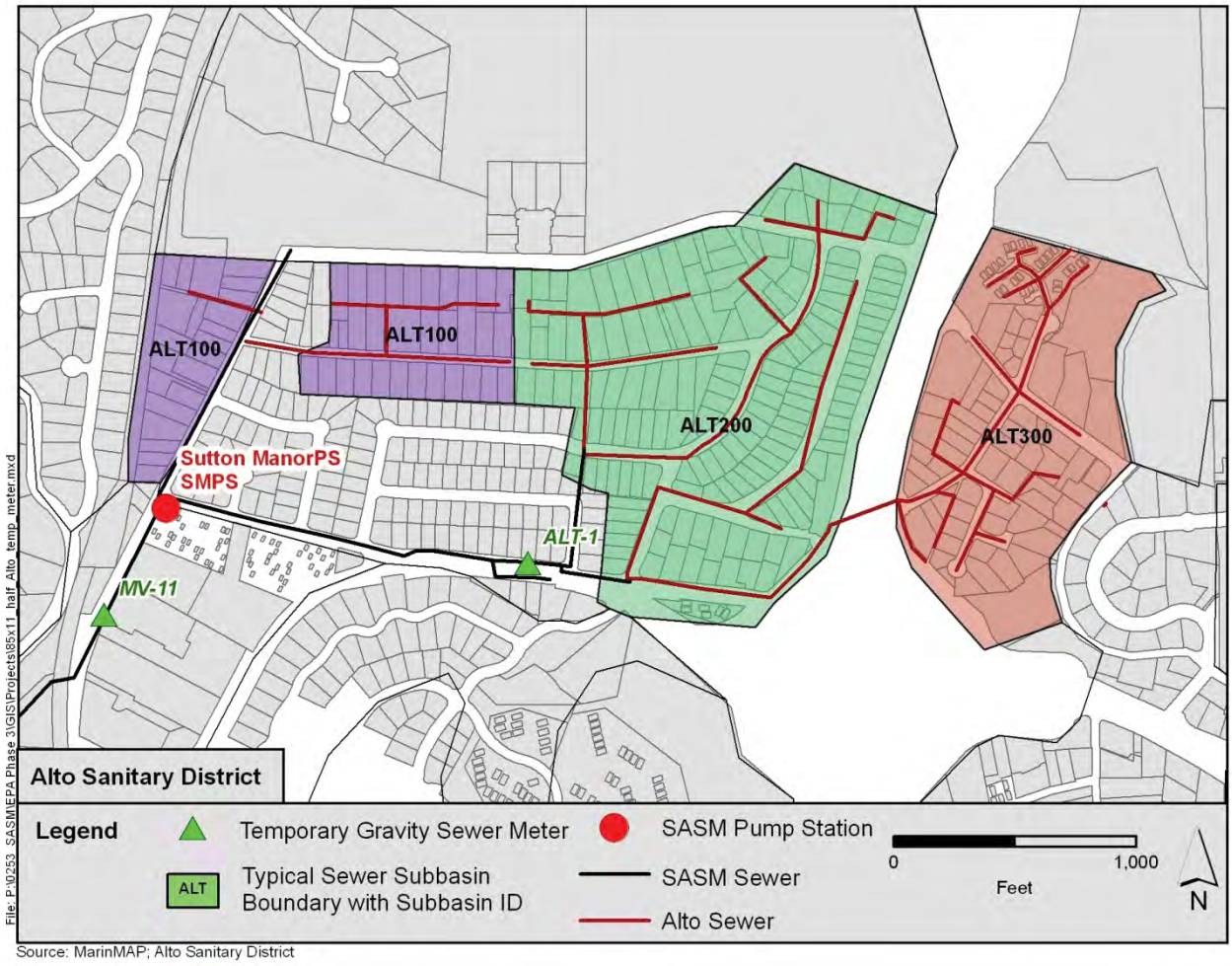


Figure 4-6: RBSD Sewer Subbasins and Flow Monitoring Sites

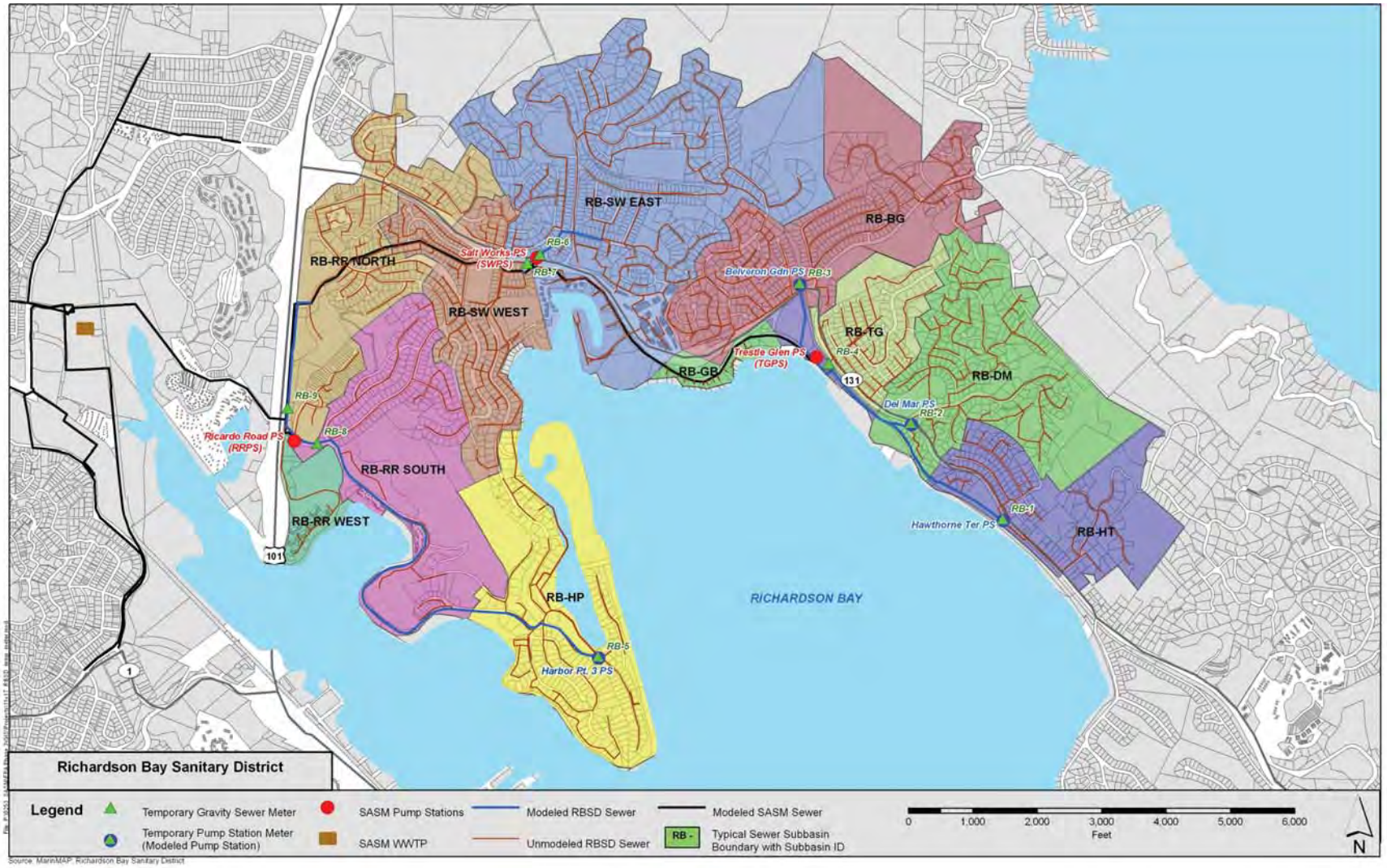
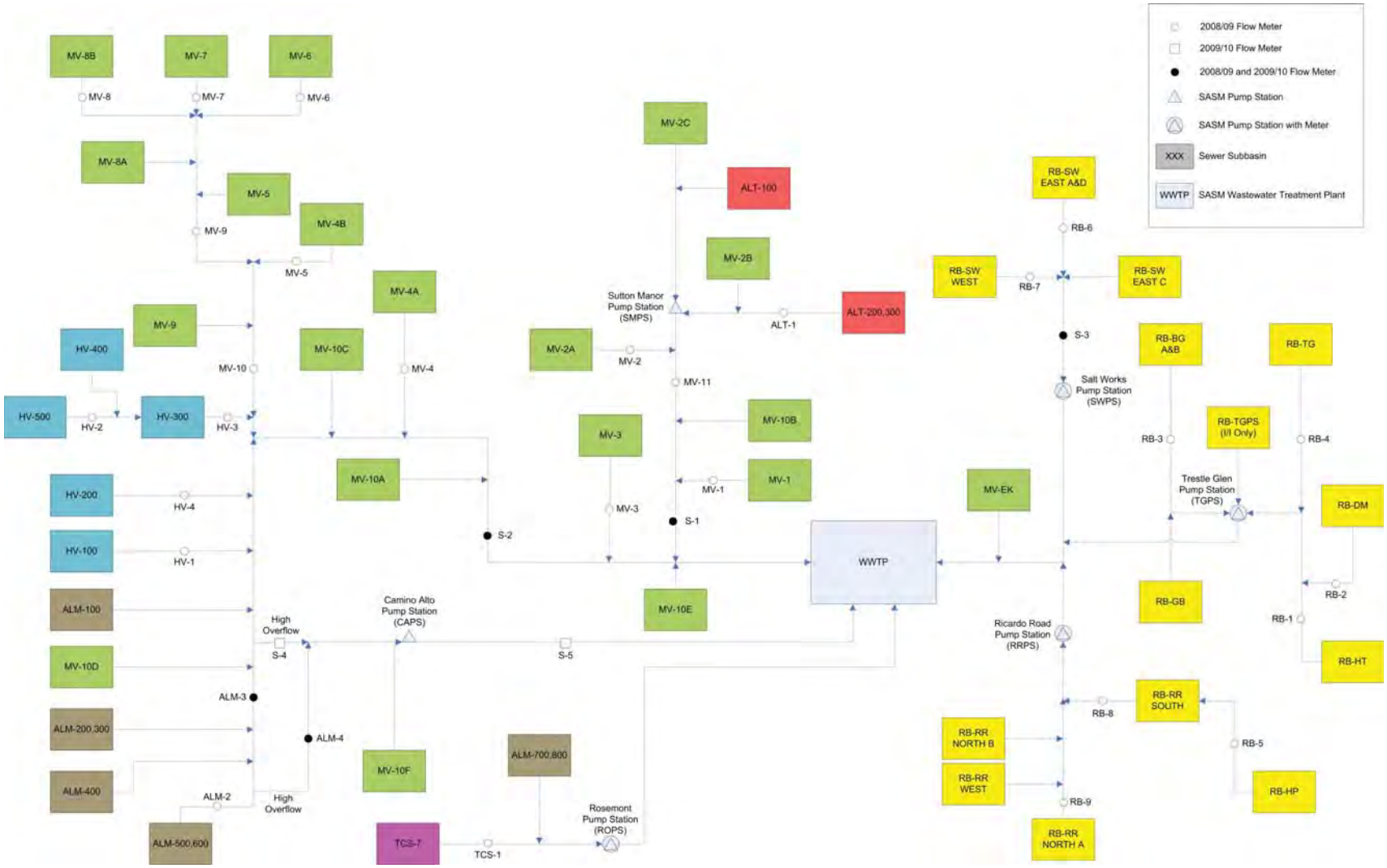


Figure 4-7: SASM System Subbasin and Flow Meter Schematic

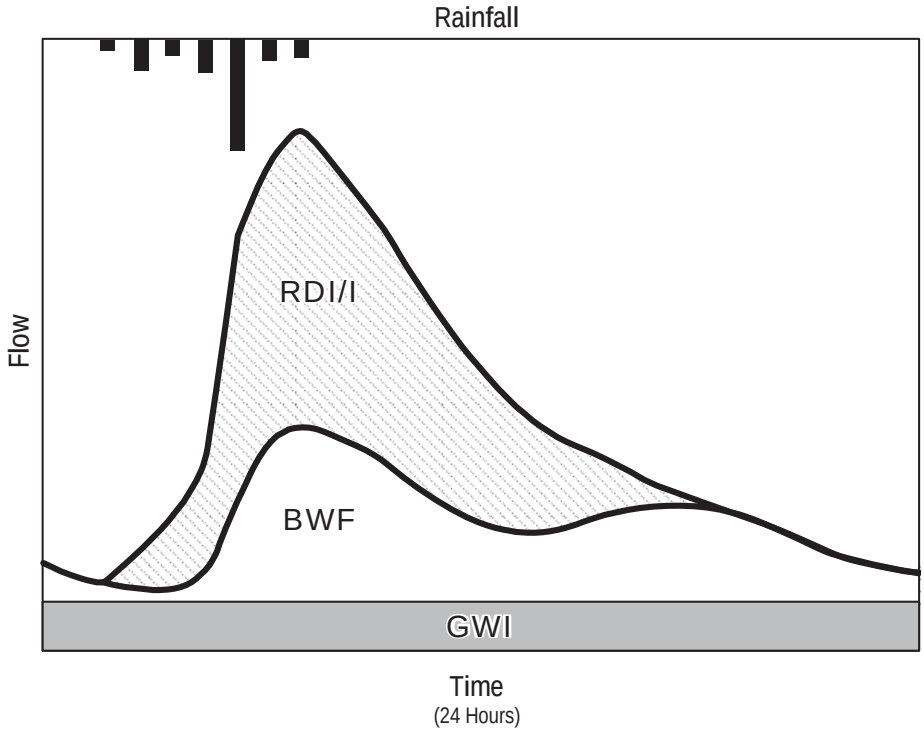


4.4 Wastewater Flow Components

Wastewater flows include three components: base wastewater flow (BWF), groundwater infiltration (GWI), and rainfall-dependent infiltration/inflow (RDI/I), as illustrated conceptually in **Figure 4-8**.

Figure 4-8: Wastewater Flow Components

(Not to scale)



BWF represents the sanitary and process flow contributions from residential, commercial, institutional, and industrial users of the system. BWF varies throughout the day, but typically follows predictable diurnal patterns depending on the type of land use.

GWI is groundwater that infiltrates into defects in sewer pipes and manholes, particularly in winter and springtime in low-lying areas. GWI is typically seasonal in nature and remains relatively constant during specific periods of the year. However, rainfall clearly has long-term impacts on GWI rates in some areas, as evidenced by measurable increases in GWI after prolonged periods of rainfall.

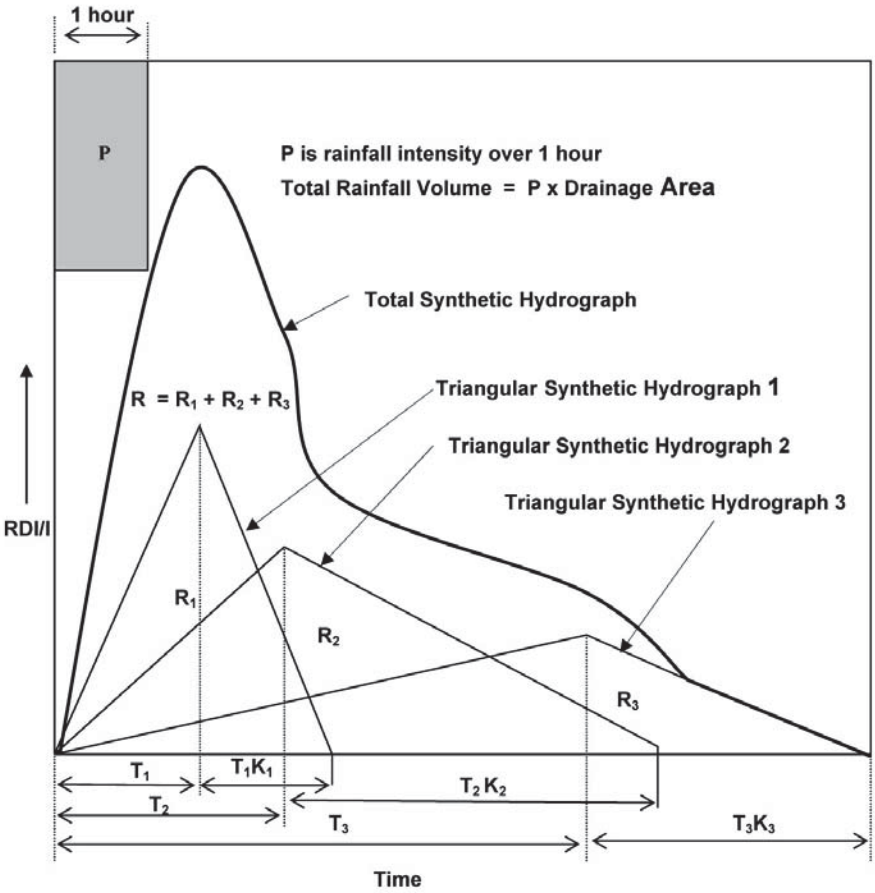
RDI/I is storm water inflow and infiltration that enter the system in direct response to rainfall events. RDI/I may enter the sewer system through direct connections (termed “inflow” sources) such as holes in manhole covers, cross-connections from storm drain systems, or illegally connected roof leaders or area drains; or, more commonly, through subsurface defects in sewer pipes, manholes, and service laterals (termed “infiltration” sources). RDI/I typically results in short term peak flows that recede relatively quickly after the rainfall ends. The magnitude of RDI/I flows are related to the intensity and duration of the rainfall, the relative soil moisture at the time of the rainfall event, and the condition of the sewers.

It should be noted that the inflow and infiltration components of RDI/I cannot easily be distinguished through analysis of flow monitoring data alone, as some sources of rainfall-dependent infiltration, such as

defects in shallow pipes and service laterals, may result in very rapid flow increases and high peak flows in a manner similar to the response from direct inflow sources. Therefore, specific inflow and infiltration sources are best identified through field investigation techniques such as manhole and sewer inspections and smoke and dye testing.

For this capacity assessment, wastewater flow components were quantified based on data collected during the 2008/09 and 2009/10 flow monitoring programs. Specifically, BWF was quantified based on flows on non-rainfall days not impacted by prior rainfall. As such, BWF may include some amount of GWI that occurs year-round or early in the wet weather season. Wet weather-related GWI and RDI/I were quantified based on the flow monitoring data during and following rainfall events. A unit hydrograph approach was used to represent RDI/I response as a function of rainfall for each metered subbasin (unmetered subbasins, generally very small areas, were assigned I/I parameters based on similar, nearby metered areas). Specifically, RDI/I response to rainfall events was quantified in terms of three sets of triangular unit hydrograph parameters that represent the volume percentage of rainfall that enters the system as RDI/I and the shape of the RDI/I hydrograph as a function of each hour of rainfall. The three unit hydrographs, illustrated in **Figure 4-9**, represent different types of response: fast, medium, and slow. By applying the RDI/I hydrograph parameters to a design rainfall event (discussed in next section), the predicted design RDI/I response for each area of the system can be estimated.

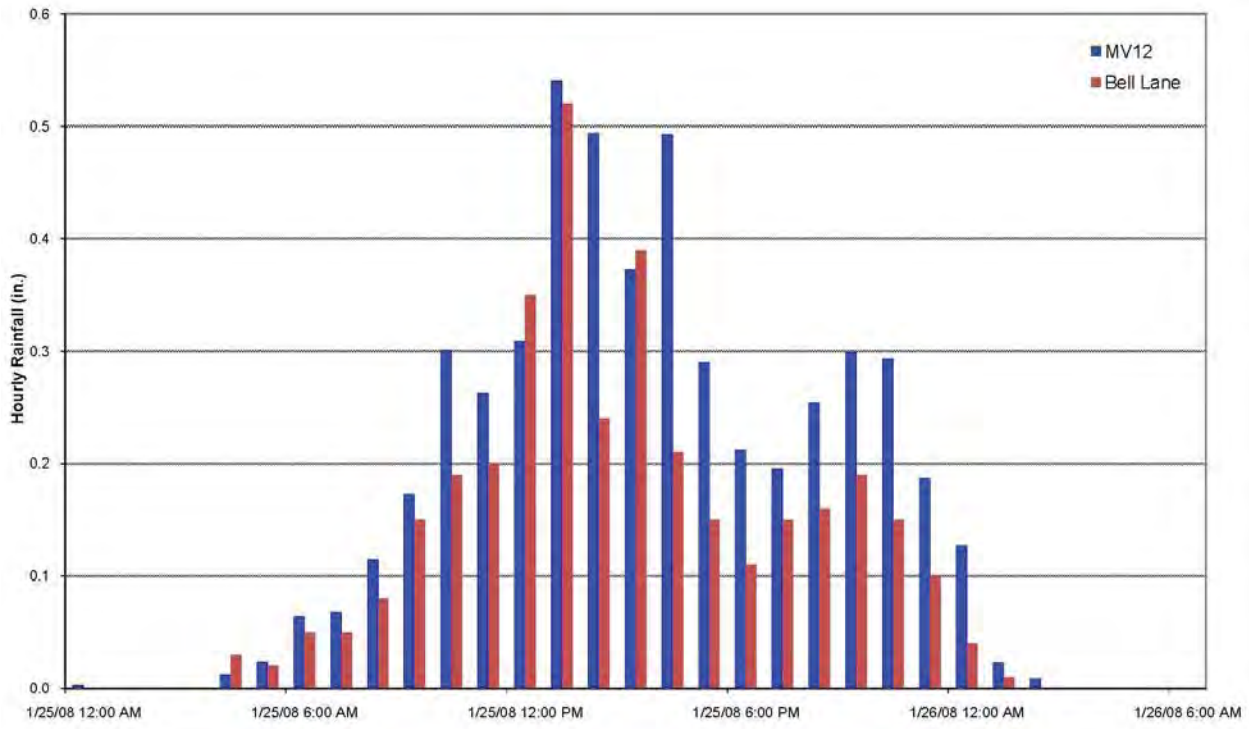
Figure 4-9: RDI/I Hydrograph Components



4.5 Design Event

Since flow response to wet weather events varies with storm rainfall (as well as other factors), quantifying I/I in the system and identifying hydraulic constraints must be referenced to a "design" condition or "design event." In the case of SASM, the design event has been defined as the storm of January 25, 2008, a notable event in recent memory that resulted in high flows to the SASM WWTP and a major wet weather spill. Another recent large storm event that has been used by some agencies as a design condition, the storm of December 31, 2005, caused widespread surface flooding and drainage problems in many areas of Marin County, including the SASM service area; therefore, it was not considered appropriate for SASM for use in assessing wastewater system capacity. Rainfall amounts for the January 25, 2008 storm were obtained for two rain gauges in Mill Valley and one gauge maintained by TCSD at its district offices on Bell Lane. The design event rainfall pattern is depicted in **Figure 4-10** for the TCSD and one of the Mill Valley rain gauge sites.

Figure 4-10: Design Rainfall Event



Based on available rainfall depth-duration-frequency statistics, the January 25, 2008 storm is estimated to have been an approximate 20-year return frequency event in the Mill Valley area for 24-hour duration, and a 5- to 10-year frequency event for shorter (e.g., 4- to 6-hour) durations. Therefore, this storm is considered an appropriate event for assessment of both collection system and WWTP capacity.

The I/I estimates and system capacity analysis results presented in the remaining sections of this Capacity Assessment are based on the analysis of the system, using the hydraulic model, for the design wet weather event.

4.6 Areas, Sources and Quantities of Inflow and Infiltration

This section discusses the areas, likely sources, and estimated quantities of I/I in the SASM and member agency collection systems.

Through the model calibration process, flow estimates were developed for each sewer subbasin. **Table 4-1** presents flows for the sewer subbasins, including average dry weather BWF, peak RDI/I, and model-computed design event peak wet weather flow and associated peaking factor. Because it is difficult to separate out, wet season GWI, if any, is generally included in the BWF and RDI/I estimates, with the exception of subbasin RB-TGPS. This subbasin was created to account for additional flows measured at the Trestle Glen Pump Station that could not be accounted for in the upstream metered areas that are tributary to the pump station. It is believed that this additional flow may reflect tidal influence and groundwater infiltration in low lying areas of this portion of the RBSD system.

It should also be noted that I/I into SASM pipelines cannot be specifically isolated and may be included in the estimated I/I for some of the member agencies. This is especially true for Almonte, as all of the flow meters used to isolate Almonte flows were installed on SASM pipelines. The SASM pipelines upstream of the Almonte flow meters comprise 15 to 20 percent of the total length of sewers tributary to these meters. These are some of the oldest pipes in the SASM system and may be subject to significant infiltration.

Table 4-1: Estimated Wastewater Flows for Sewer Subbasins

Subbasin[1]	ADWF[2] (mgd)	Peak RDI/I[3] (mgd)	PWWF[4] (mgd)	WWPF[5]
TCSD-7	0.036	0.49	0.53	15
ALM200,300[6]	0.059	0.82	0.88	15
ALM400[6]	0.010	0.14	0.15	15
ALM500,600[6]	0.047	1.08	1.13	24
ALM700,800[6]	0.025	0.36	0.39	16
HV100	0.028	0.91	0.93	33
HV200	0.015	0.32	0.33	21
HV300	0.014	0.23	0.25	18
HV400	0.065	1.09	1.15	18
HV500	0.056	1.74	1.76	32
MV-1	0.037	0.40	0.44	12
MV-2A	0.030	0.85	0.88	29
MV-2B[6]	0.011	0.16	0.17	15
MV-2C[6]	0.010	0.16	0.17	17
MV-3	0.053	1.57	1.63	31
MV-4A	0.226	1.59	1.72	8
MV-4B	0.065	1.40	1.47	23
MV-5	0.054	0.66	0.72	13
MV-6	0.088	0.99	1.03	12
MV-7	0.024	0.30	0.32	14
MV-8A	0.075	0.88	0.96	13
MV-8B	0.092	0.93	1.02	11
MV-9	0.064	0.49	0.55	9

Subbasin[1]	ADWF[2] (mgd)	Peak RDI/I[3] (mgd)	PWWF[4] (mgd)	WWPF[5]
MV-10[6]	0.207	0.61	0.85	4
MV-EK	0.100	1.26	1.37	14
ALT100[6]	0.006	0.09	0.10	15
ALT200,300	0.056	1.54	1.60	29
RB-BG	0.068	1.18	1.26	18
RB-DM	0.043	0.59	0.64	15
RB-GB	*0.005*	*0.03*	*0.03*	*6*
RB-HP	0.050	0.59	0.65	13
RB-HT	0.026	0.61	0.64	24
RB-RR NORTH	0.135	1.19	1.34	10
RB-RR SOUTH	0.132	0.84	0.99	7
RB-RR WEST	0.030	0.16	0.20	7
RB-SW-EAST	0.253	1.44	1.75	7
RB-SW WEST	0.046	1.75	1.79	39
RB-TG	0.026	0.46	0.49	19
RB-TGPS[7]	0.100	0.13	0.23	N/A

Notes:
1. Flows for some small and/or adjacent subbasins are combined.
2. ADWF = Average Dry Weather Flow (based on non rainfall periods during January 2009 and 2010).
3. RDI/I = rainfall-dependent I/I (for design event).
4. PWWF = Peak Wet Weather Flow (for design event).
5. WWPF = Wet Weather Peaking Factor (ratio of design event PWWF to ADWF).
6. Flow estimates for these subbasins were derived from meters installed on SASM lines and may therefore include flow (infiltration and inflow) from SASM pipelines as well as member agency sewers (see discussion in the paragraph preceding this table).
7. Represents unidentified flow in vicinity of Trestle Glen PS.

As part of the condition assessment work summarized in Section 2, the SASM agencies have conducted extensive CCTV inspection of sewers in their collection systems. The inspections identified defects that are common to most sewer systems in the San Francisco Bay Area that experience significant I/I during wet weather, including cracks in pipes, offset and open joints, and root intrusion. It can be assumed that similar defects in laterals are also sources of infiltration in these systems.

In 2009, SASM conducted a limited smoke testing program in two areas of HVSD and one area of Mill Valley as part of its Supplemental Environmental Project to provide grants and loans for private lateral replacement. The tested areas, comprising approximately 19,000 feet of sewer mains, were portions of subbasins identified as having high wet weather peaking factors based on the 2009 wet weather flow monitoring program. The smoke testing resulted in 18 observations of smoke coming from potential pipeline defects or inflow connections, including one storm drain cross-connection, one roof leader, six missing or defective cleanout caps, eight defective laterals, and two sources that could not be determined. Based on these very limited results, it can be concluded that most sources of I/I in the SASM systems are likely defective sewer pipes, laterals, and cleanouts; but some direct inflow sources (storm drain cross connections and directly connected roof and area drains) are also likely to exist.

4.7 Hydraulic Bottlenecks

The hydraulic model was used to assess the performance of the SASM and member agency collection systems under peak wet weather flow conditions. The model was calibrated using the flow monitoring data collected during the 2008/09 and 2009/10 flow monitoring programs to determine the components of wastewater flows for each sewer subbasin, as described in subsection 4.4. The model was then run for the design event to identify bottlenecks in the system. Bottlenecks represent pipelines or pump stations that have insufficient capacity to convey the peak wet weather flows from the design event, resulting in model-predicted overflows or significant upstream surcharging.

The model software was used to display hydraulic profiles of the modeled lines, indicating the relative depth of flow with respect to the sewer pipes and ground surface. Areas where the hydraulic gradeline (HGL) or water surface is close to or potentially above the ground (for gravity sewers) indicate hydraulic bottlenecks due to localized or downstream capacity deficiencies. It should be noted that the location of the surcharge or potential overflow is not necessarily the location of the bottleneck but may be caused by a backwater effect from a hydraulic bottleneck further downstream. The relative slope of the HGL is an indicator of the severity of the capacity deficiency.

The following subsections describe the identified hydraulic bottlenecks in the SASM system and modeled portions of the member agency collection systems. The bottlenecks are illustrated on the hydraulic profiles presented in the figures. In the profiles, the green line represents the ground surface, the pink lines represent the pipe, the blue line is the water surface or HGL, and the vertical black lines are manholes or other structures. The node (manhole) IDs and distance along the pipe are presented underneath the profiles.

It should be noted that the conditions displayed on the profiles, as simulated by the hydraulic model, are not necessarily proof of any or all of the hydraulic conditions that actually occurred in the SASM system during the January 25, 2008 storm event (in fact, the agencies reported no collection system overflows associated with that event), or any or all conditions that would actually occur during other large wet weather events. Rather, the model represents a best-available assessment of areas of the system that are potentially *at risk* for wet weather overflows due to insufficient capacity. Other mitigating factors, such as the availability of storage capacity in unmodeled upstream pipes, may prevent actual overflows from occurring.

4.7.1 SASM System

The SASM conveyance system consists of three major sections: the Southside system, Northside system, and Richardson Bay system. Each of these systems is described briefly below, followed by a discussion of the identified hydraulic bottlenecks.

Southside System

The Southside system includes sewers that convey flow from TCSD, Almonte, HVSD, and the majority of Mill Valley to the SASM WWTP. Flows from TCSD and the southern portion of Almonte are conveyed via a 12-inch gravity sewer in Almonte Boulevard (SASM “upper T line”) to the SASM Rosemont Pump Station, from where they are pumped through a force main directly to the WWTP. (Note: This new force main was constructed in 2007. Prior to that time, the Rosemont PS force main discharged to a gravity sewer (SASM “lower T line”) that paralleled the Almonte trunk sewer in Almonte Boulevard and connected into it just upstream of Stadium Way.) The remaining flows from Almonte and flows from portions of HVSD are tributary to 12- and 15-inch trunks sewers that flow northwest along Almonte Boulevard (SASM Almonte Trunk Sewer or “A line”), through Tamalpais High School, and along Miller Avenue (SASM “M line”) to the junction with SASM’s 30-inch Sycamore trunk sewer just west of Reed Street. Flows from the major portion of Mill Valley and the remainder of HVSD flow southeast along Miller Avenue in a 21-inch sewer to the same junction with the Sycamore trunk sewer.

The Sycamore trunk sewer (SASM "S line") runs northeast through an easement in Sycamore Park and then east along Sycamore Avenue to the WWTP.

The Southside system has historically experienced severe wet weather issues, and a number of previous projects have provided capacity relief to the system. These projects included a relief sewer located east of Tamalpais High School (SASM Almonte Relief or "AR line"), constructed in 1986, that allows flows that surcharge the trunk sewer in Almonte Boulevard to be diverted over a weir to a 15-inch pipe that discharges to SASM's Camino Alto Pump Station (CAPS). (Note: An overflow weir to the Almonte Relief line was also constructed from the lower T line at that time. However, although normal flows are no longer conveyed through the lower T line, the line has not been plugged off, so it is still possible for flow to back up into the line from the Almonte trunk sewer and potentially overflow to the Almonte Relief line.) Another weir overflow with a diversion sewer to the CAPS is located further downstream at the intersection of Miller Avenue and Camino Alto. The CAPS was upgraded in 1998 to increase pumping capacity for wet weather flows. Flows from the CAPS are conveyed directly to the WWTP through a force main and gravity line.

Another relief line (21-inch) (SASM "SR line"), also constructed in 1986, parallels the 30-inch Sycamore trunk sewer from Camino Alto to the WWTP.

Although the previous Southside system improvements have largely eliminated the historical overflows in this area, the hydraulic modeling indicates that the high wet weather flows may still pose a risk of overflow, particularly at the upstream end of the Almonte trunk sewer near Helen Avenue (see **Figure 4-11**).

The 30-inch Sycamore trunk sewer is also a known capacity restriction in the Southside system. This sewer is laid on a very flat slope, and does not have sufficient capacity to convey peak wet weather flows without surcharging. The backwater impact of the surcharged trunk extends upstream into the sewers in Miller Avenue (see **Figure 4-12**), both south toward Camino Alto and north toward Montford Avenue.

Northside System

The Northside system includes sewers that convey flow from Alto and the northeastern portion of Mill Valley south to the WWTP. The system includes a 12-inch trunk sewer located on East Blithedale and Ashford Avenues (SASM "SM line") that conveys primarily Alto and some Mill Valley flows west to Lomita Drive, where they discharge to SASM's Sutton Manor Pump Station (SMPS). Another sewer collects flows tributary to Lomita Drive north of Ashford. The SMPS is a lift station that discharges into a 15-inch trunk sewer in Lomita Drive that runs southwest to Camino Alto, transitioning to a 21-inch pipe at East Blithedale Avenue (SASM "L line"). The 21-inch line connects to the Sycamore trunk sewer at Sycamore Avenue.

The sewer in Ashford Avenue was replaced in 1990 (it was previously 8-inch diameter) due to overflows that had occurred in the area of Tower Drive and Dorset Lane. The most downstream segment of the 8-inch pipe, just upstream of Lomita Drive, is very deep, so that line was not replaced at the time; rather, a parallel 12-inch pipe was installed at a higher elevation to allow the 8-inch pipe to overflow when the flow level reached approximately 4 feet above the 8-inch pipe crown at its upstream end. The 8-inch pipe was subsequently pipe burst to a 14-inch HDPE pipe (approximate 12.3-inch inside diameter) in about 2001.

The current hydraulic modeling indicates that the Ashford line still represents a capacity restriction and poses a risk of overflow under peak wet weather conditions (see **Figure 4-13**). Although the 12-inch overflow line does provide some relief, it is too high to reduce the surcharge enough to prevent the upstream backwater from potentially extending almost to the ground elevation under a design wet weather flow event. The wet weather flows generated upstream appear to be higher than they were originally estimated when the 1990 relief project was constructed.

Figure 4-11: Hydraulic Profile of SASM Almonte Trunk Sewer (Design Event PWWF)

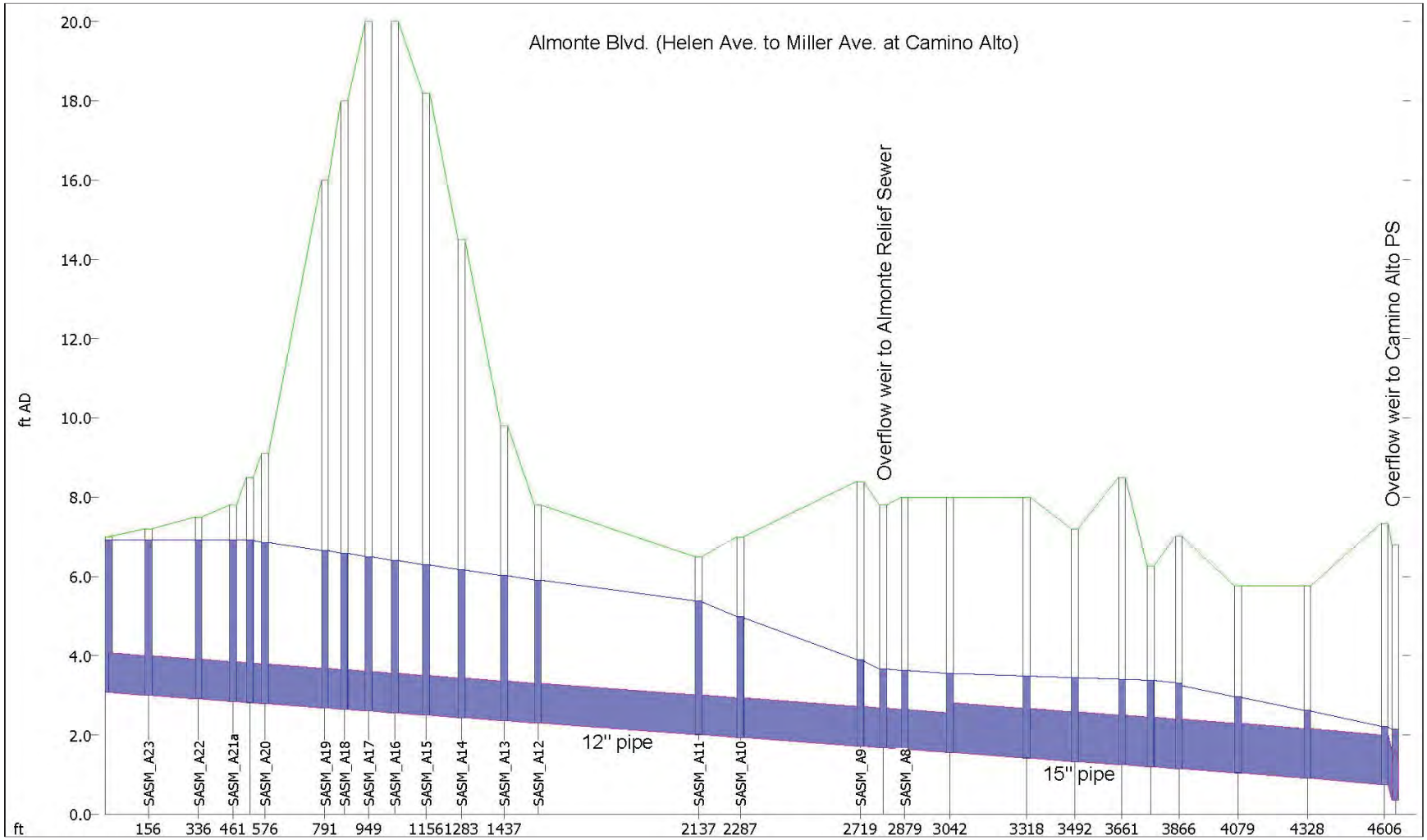


Figure 4-12: Hydraulic Profile of SASM Miller Avenue and Sycamore Trunk Sewers (Design Event PWWF)

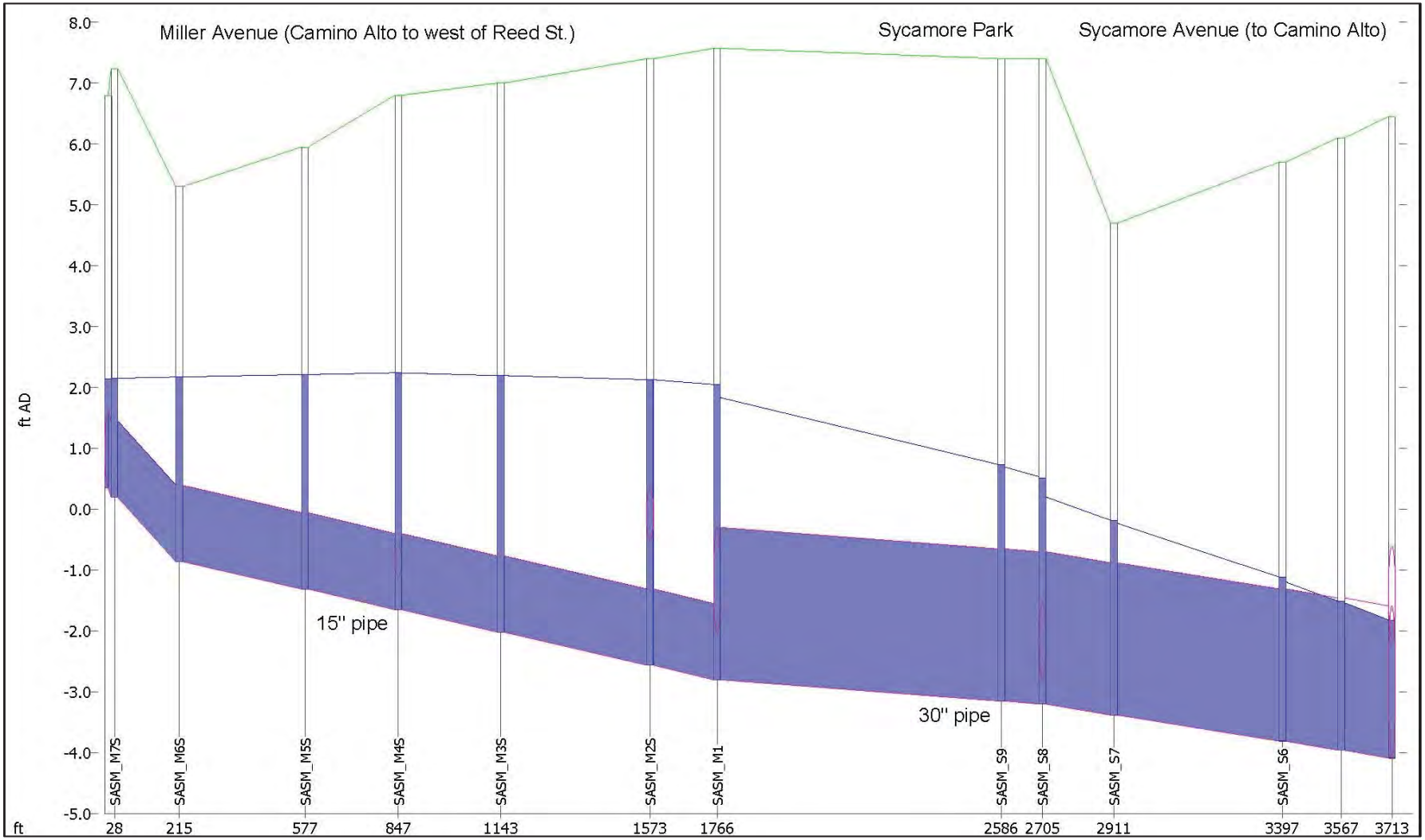
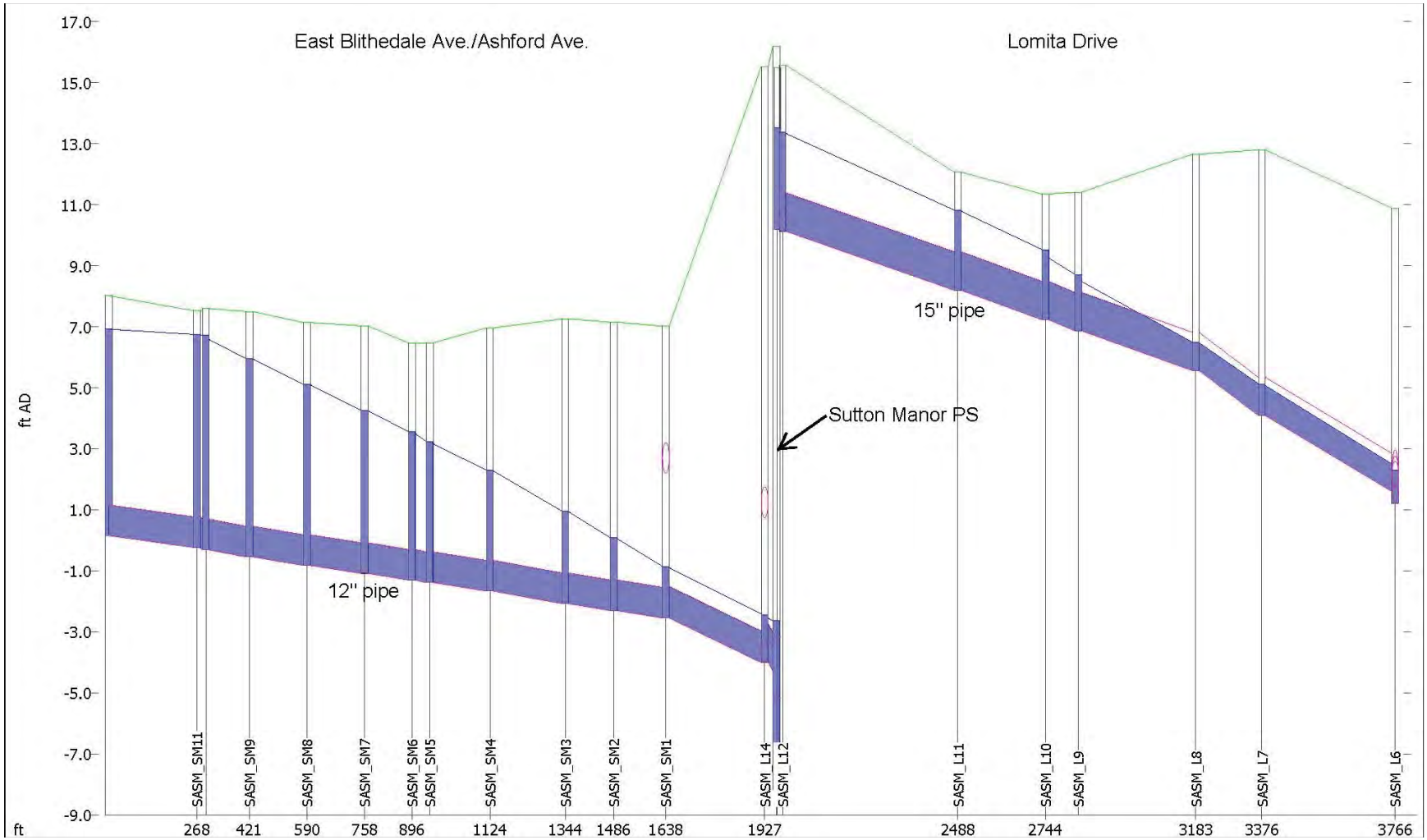


Figure 4-13: Hydraulic Profile of SASM Sutton Manor System Trunk Sewers (Design Event PWWF)



Due to the high flows generated upstream, the SMPS also does not have sufficient firm capacity (but does have adequate total capacity) to convey the design event peak wet weather flows (see Section 2, Pump Station Reliability Certification for Peak Wet Weather Flows, for further discussion).

Richardson Bay System

The SASM facilities serving RBSD consist of three pump stations (Trestle Glen, Salt Works, and Ricardo Road) that discharge to a common force main (14- through 21-inch) that extends east parallel to Tiburon Boulevard and along Belvedere Drive, south along the Highway 101 east frontage, and then east across the highway and along Hamilton Drive to the SASM WWTP. Approximately 1,000 feet east of the WWTP, flows from the Enchanted Knolls area of Mill Valley discharge via a 12-inch sewer into the last (downhill) segment of the force main.

There are no identified capacity deficiencies in the Richardson Bay portion of the SASM system.

4.7.1 Mill Valley Collection System

The major facilities in the City of Mill Valley collection system include a 15- and 18-inch trunk sewer that extends southwest along Miller Avenue from Throckmorton Avenue to Montford Avenue/La Goma Street, connecting into the 21-inch SASM sewer in Miller Avenue at its downstream end. A 10- and 18-inch Mill Valley trunk sewer also parallels the 21-inch SASM L line in Camino Alto from East Blithedale Avenue to Sycamore Avenue. A 15-inch sewer in Sycamore Avenue connects to the 30-inch SASM trunk near Nelson Avenue.

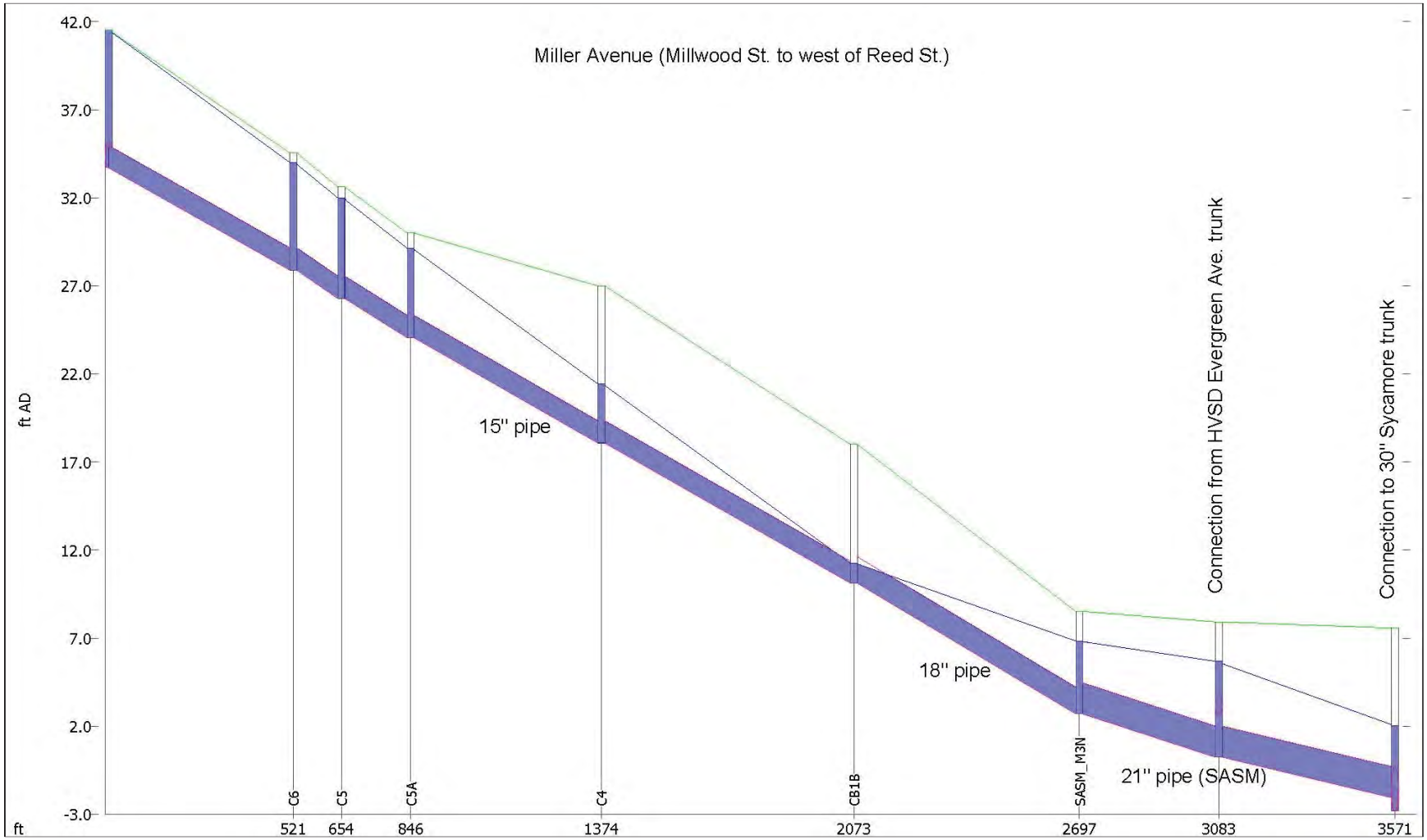
The hydraulic modeling indicates that the 15-inch trunk sewer in Miller Avenue from Millwood Street to Willow Street is undersized for the projected peak wet weather flows, resulting in a potential risk of overflows in the vicinity of Millwood Street (see **Figure 4-14**). The two most downstream 21-inch segments in the profile shown in the figure are SASM lines that are surcharged under peak wet weather conditions due to backwater from the 30-inch Sycamore trunk.

4.7.2 Richardson Bay Sanitary District Collection System

The modeled facilities in the RBSD collection system include the Hawthorne Terrace, Del Mar, and Belveron Gardens pump stations and downstream force mains and gravity sewers that convey flow to the SASM Trestle Glen Pump Station. The system also includes gravity sewers that convey flow to the Salt Works Pump Station from the northeast and southwest, and to the Ricardo Road Pump Station from the north and southeast. The RBSD Harbor Point 3 pump station serves the southern portion of the district and pumps flow through a force main in Seminary Drive into the gravity sewer that discharges to the Ricardo Road Pump Station from the south.

Although the modeling identified some sewers in the RBSD system that may be surcharged under peak design event wet weather flow conditions, none of the surcharge is severe enough to present a significant risk of overflow. The Belveron Gardens Pump Station (BGPS) has been identified as not having sufficient firm capacity to convey the predicted peak wet weather flows based on the calibration of the hydraulic model to 2009 flow monitoring data. However, the District completed a sewer rehabilitation project in the BGPS tributary area this past year that included rehabilitation or replacement of over 7,000 feet of sewer mains, lower laterals, and some upper laterals. This project comprised over 25 percent of the total area tributary to the pump station in a low-lying area believed to be a significant source of infiltration. Assuming that the area rehabilitated contributed 50 percent of the total I/I in the pump station tributary area, and that the rehabilitation work reduced the I/I by 50 percent, resulting in an overall 25 percent I/I reduction in the pump station tributary area, the pump station should now have adequate firm capacity (proposed follow-up monitoring to confirm the post-rehabilitation flows is discussed in under Pump Station Reliability Certification for Peak Wet Weather Flows in Section 2 of this report).

Figure 4-14: Hydraulic Profile of Mill Valley/SASM Miller Avenue Trunk Sewer (Design Event PWWF)



4.7.3 Homestead Valley Sanitary District Collection System

The HSVD collection system discharges into SASM's Miller Avenue trunk sewer at several locations. The main trunk sewer in the District's collection system extends west along Evergreen Avenue from Miller Avenue to Melrose Avenue, with a branch sewer extending south along Scott Street to Laverne Avenue. Over the past few years, most of the Evergreen Avenue trunk sewer has been replaced with 12-inch PVC and 14-inch HDPE (approximate 12.3-inch inside diameter) pipe.

The hydraulic modeling indicates that the lower portion of the Evergreen Avenue trunk sewer from east of Linden Avenue to Miller Avenue is undersized for the projected design event peak wet weather flows, resulting in a potential risk of overflows (see **Figure 4-15**). The potential surcharge is increased due to backwater from SASM's Miller Avenue trunk sewer.

4.8 Impact to SASM from Member Agency Collection Systems

The peak wet weather flow to the SASM WWTP for the design event is predicted by the model to be approximately 31 mgd. This is very close to the original design peak wet weather flow capacity of the WWTP of 32.7 mgd and slightly lower than the peak influent of flow of 33 mgd that was recorded at the plant during the January 25, 2008 storm event (the actual influent flow may have been slightly lower based on 2009 influent meter calibration records).

To validate the predicted modeled peak flow, the model was also run for a synthetic rainfall event assumed to have a total 24-hour rainfall amount of 4.82 inches, representing a 20-year return frequency event for the Mill Valley area[1], and an SCS Type IA temporal rainfall distribution. (Note: for this model run, the rainfall was assumed to be the same throughout the SASM service area. While this assumption does not reflect the actual variation of rainfall with location and elevation, it provides a reasonable approach for assessing the total flow in the system.) The peak flow to the WWTP based on the synthetic 20-year return frequency rainfall event was approximately 32 mgd, again very close (within 3 percent) to the original WWTP design flow and the model-predicted and recorded flow for the January 25, 2008 event.

These results indicate that the flows to the SASM WWTP are similar to those projected during the design of the system, and that *overall flows do not appear to have changed significantly over the past 25 to 30 years*. However, the peak wet weather flows in the SASM system are still very high, representing a design event peak flow to the WWTP of about 15 times summertime average dry weather flow. These high peak flows result in surcharging of SASM pipelines and, in some cases, adverse backwater impacts on member agency sewers. Furthermore, it appears that the *distribution* of flows within the system may be different than originally estimated, resulting in more severe capacity deficiencies in some areas of the system than had been previously calculated. Flows from Alto, Almonte, HVSD, and Mill Valley have the most significant capacity impacts on the SASM system, as indicated by the areas of predicted high surcharge during peak wet weather conditions.

Table 4-2 summarizes the contribution by agency to the average dry weather and total design event peak wet weather flow to the SASM WWTP. Note that in this table, the peak flows by agency represent the sum of the subbasin peak flows, which is about 5 percent higher than the modeled peak flow to the WWTP due to flow attenuation and existing capacity restrictions in the system. It should also be noted that I/I into SASM pipelines cannot be specifically isolated and may be included in the estimated flow values for some of the member agencies, most notably Almonte. As noted previously, all of the flow meters used to isolate Almonte flows were installed on SASM pipelines. The SASM pipelines upstream of the Almonte flow meters comprise 15 to 20 percent of the total length of sewers tributary to these meters and may be subject to significant infiltration.

[1] California Department of Water Resources precipitation depth-duration-frequency data for Mill Valley (Table C-1, Sewerage Agency of Southern Marin, Sewer System Evaluation Survey, Black & Veatch, 1980)

Figure 4-15: Hydraulic Profile of HVSD Evergreen Avenue Trunk Sewer (Design Event PWWF)

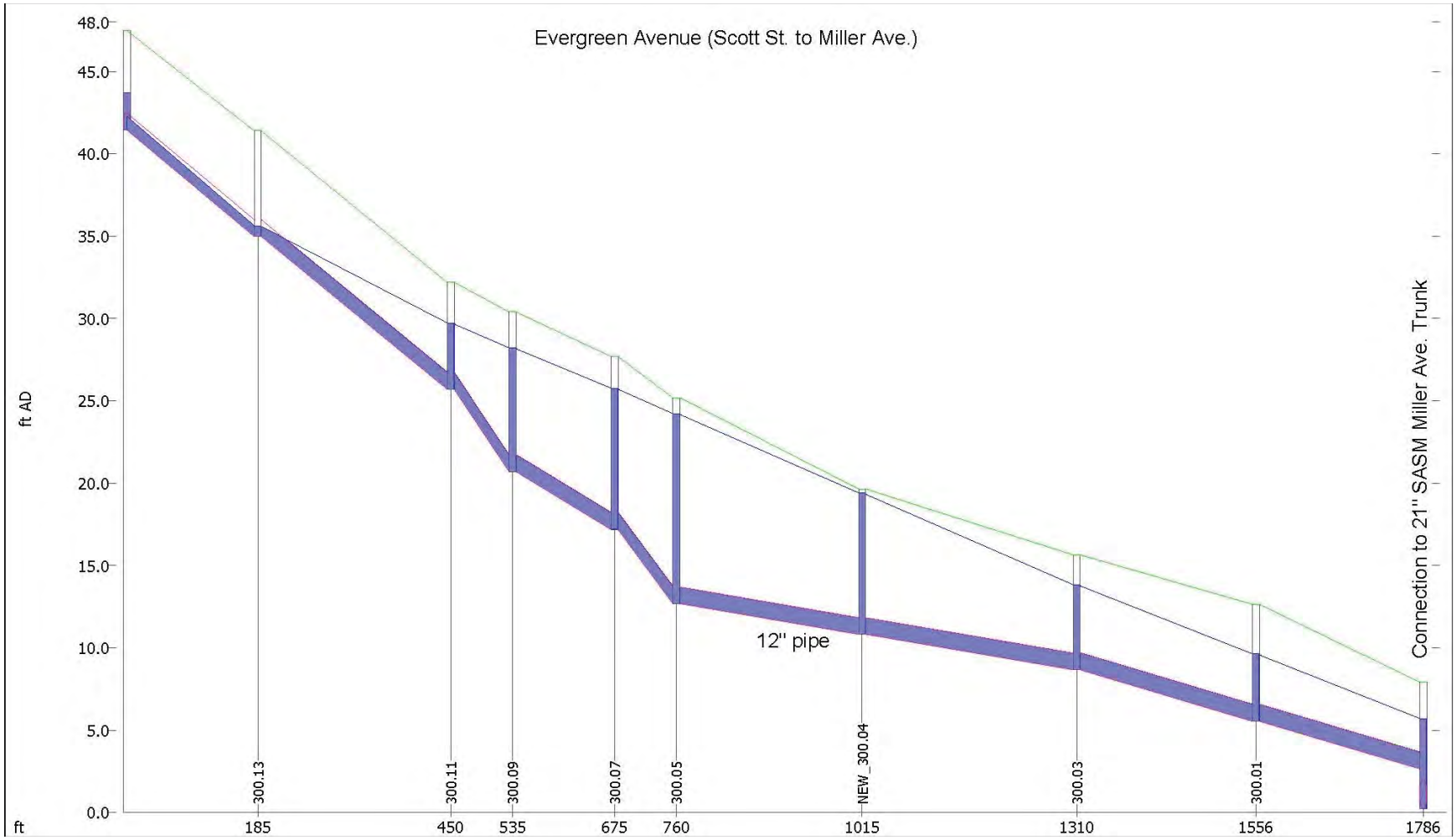


Table 4-2: Flows from Member Agencies

Agency[1]	ADWF[2] (mgd)	Percent of Total	PWWF[3] (mgd)	Percent of Total	Overall WWPF[4]
TCSD	0.04	1.5%	0.5	1.6%	15
Almonte	0.14	5.7%	2.6	7.9%	18
HVSD	0.18	7.2%	4.4	13.6%	25
Mill Valley	1.14	46.0%	13.3	40.9%	12
Alto	0.06	2.5%	1.7	5.2%	27
RBSD	0.91	37.1%	10.0	30.8%	11

Notes:
Flows based on sum of individual subbasin flows from Table 4-1.

1. Flow estimates for all or portions of some agencies, most notably Almonte, were derived from meters installed on SASM lines and may therefore include flow (infiltration and inflow) from SASM pipelines as well as member agency sewers (see discussion in the paragraph preceding this table).
2. ADWF = Average Dry Weather Flow during flow monitoring periods (January 2009 and 2010)
3. PWWF = Peak Wet Weather Flow for design event
4. WWPF = Wet Weather Peaking Factor (ratio of design event PWWF to ADWF)

The SASM WWTP can handle a PWWF of approximately 24.7 mgd (limited by effluent discharge and outfall capacity), with flows exceeding this amount diverted to an on-site equalization storage basin. The equalization pond was expanded in 2008 following the overflow events that occurred in January of that year. The pond capacity was increased to 3.3 million gallons (MG) through that project. The estimated overflow equalization volume required for a 20-year design event based on the modeling conducted for this capacity assessment ranges from 2 to 3 MG, indicating that the pond would have sufficient capacity to handle the flows from an event comparable to the January 25, 2008 storm assuming similar antecedent conditions as those that occurred during that period.

Section 5 Capacity Assurance Plan

5.1 Introduction

5.1.1 Purpose

This portion of the SSRAP submittal presents the proposed Capacity Assurance Plan to comply with subsection V.B of the Order. This subsection of the Order requires that the agencies develop short- and long-term capital improvement plans that provide for improvements to the system as needed to ensure that there is sufficient capacity to convey peak wet weather flows to the SASM WWTP without overflows from collection system pipelines or pump stations or bypasses of flow from the SASM WWTP.

5.1.2 Requirements of the EPA Amended Order for Compliance

The EPA Order, Section V.B includes the following requirements:

V. CAPACITY ASSURANCE

B. Capacity Assurance Plan:

1. *By October 15, 2010, SASM and the member agencies shall propose and schedule short-term (five years and less) and long-term (beyond five years) improvements identified from the condition and capacity assessments completed in Paragraph IV. The plan(s) shall consider the effects that existing capacity limitations and future upgrades may have on the Sewerage Agency of Southern Marin Wastewater Treatment Plant and other collection systems. The plan(s) should be sufficient to eliminate spills from the collection systems and wastewater treatment plant during peak wet weather. The plan may be submitted along with the plan that addresses the requirements under Paragraph VI.A for repair, rehabilitation and replacement of sewer pipes.*
2. *By October 15, 2013, SASM and the member agencies shall complete short-term improvements pursuant to Paragraph V.B.1. The improvements shall address preliminary I&I control, conveyance of peak flows, storage of peak flows, and improvements to treatment plant capacity.*
3. *SASM and the member agencies shall implement the long-term improvements pursuant to Paragraph V.B. 1 in accordance with the approved schedule. The improvements shall address long-term I&I control, rehabilitation and repair of sewer mains, and as needed, rehabilitation of private laterals.*

5.2 Basis of Capacity Assurance Plan

The Capacity Assurance Plan is based on the results of the capacity assessment presented in the previous section of this report. The capacity assessment estimated the peak wet weather flows in the SASM conveyance system and member agency collection systems for a design peak wet weather flow event, considered to be equivalent to an approximate 20-year frequency, 24-hour rainfall event with a peak 4- to 6-hour rainfall comparable to a 5- to 10-year frequency return period.

The goal of the Capacity Assurance Plan is to alleviate capacity deficiencies in the system that pose the most significant risk of overflows under such rainfall conditions. It should be emphasized that the identification of potential locations of overflows and predictions of overflow reduction or elimination are based on the estimated flow conditions as simulated in the hydraulic model, and reflect the relative accuracy and limitations of the model as described in Section 4.

For purposes of identifying needed improvements, any model-predicted surcharge within one foot of the ground surface or HGL exceeding the ground surface elevation, flow exceeding the capacity of system pump stations, or flow exceeding the hydraulic capacity of the plant and available equalization storage, are considered to represent unacceptable risks of overflow that should be addressed as part of the short-term capital improvement plan (CIP). In the long-term, the goal of the agencies is to further reduce system surcharge and ensure that all pump stations are equipped with firm capacity (capacity with the largest pumping unit out of service) to convey design event peak wet weather flows.

Options for provided needed capacity assurance include:

- Replacement of sewer pipelines with larger lines
- Construction of new relief sewer pipelines
- Expansion of pump station capacity
- Diversion of flows from capacity-deficient pipelines or pump stations to other existing facilities with available capacity
- Construction of upstream flow storage facilities
- I/I reduction in member agency collection systems

Construction of upstream storage basins in the collection systems is not considered a viable alternative for the SASM agencies because of the highly developed service area and challenging topography. I/I reduction is considered the optimal solution but may require a longer timeline to implement and a program that involves rehabilitation of sewer laterals on private property as well as public sewer mains. Therefore, the Capacity Assurance Plan includes some conveyance improvements to be implemented in the short-term to address the most severe capacity issues in the system, combined with I/I reduction efforts to meet the agencies' long-term capacity assurance goals.

5.3 Proposed Short-term Capacity Improvement Projects

The proposed short-term capacity improvement projects are described below.

5.3.1 SASM Projects

The following projects are proposed for the SASM system:

- Construct an overflow flow diversion from the Almonte trunk sewer just downstream of Rosemont Avenue to the TCSD trunk sewer just upstream of the Rosemont Pump Station (there may be an existing connection in this area that could be used or modified for this purpose). This diversion would significantly reduce the predicted surcharge and risk of overflow in the Almonte trunk sewer. The Rosemont Pump Station would still have adequate firm capacity to handle the increased flows during peak flow periods.
- Lower the weirs on the overflow connections to the Almonte relief sewer and the Miller/Camino Alto diversion to the Camino Alto Pump Station (CAPS). Lowering the weirs at these locations would allow diversion of more flow to the Almonte relief sewer and to the CAPS. This would reduce the flows to the Miller Avenue and Sycamore trunk sewers, maximize use of existing CAPS wet weather pumping capacity, and thereby minimize risk of overflows in the Almonte and Miller Avenue trunk sewers.
- Upgrade Sutton Manor Pump Station to provide 1,300 gpm (1.87 mgd) firm capacity for design event PWWF (see discussion in Section 2, Pump Station Reliability Certification for Peak Wet Weather Flows).

- To alleviate the potential risk of overflow from the Ashford Avenue/East Blithedale Avenue trunk sewer (SASM SM line), Alto Sanitary District would need to conduct sewer rehabilitation (see subsection on Alto Projects below) in order to lower the predicted HGL to more than one foot below the ground surface under design event peak wet weather flow conditions.

5.3.2 Mill Valley Projects

The following project is proposed for the Mill Valley system:

- Construct a high overflow diversion to divert flow from the 18-inch trunk sewer in Miller Avenue at Millwood Street to the parallel 8-inch sewer. This project would address the potential overflow. and significantly reduce the predicted surcharge, in the 15-inch trunk sewer between Millwood Street and Willow Street.

5.3.3 HVSD Projects

The following project is proposed for the HVSD system:

- Perform sewer system rehabilitation in Subbasin HV500 sufficient to reduce I/I by 10 percent (or sufficient rehabilitation in Subbasins HV300, 400, and/or 500 to achieve an equivalent amount of I/I reduction). Rehabilitation of approximately 20 percent of the sewers and associated lower laterals in Subbasin HV500 (~5,200 feet) would be required (this assumes that a 50 percent reduction in I/I can be achieved through rehabilitation of mainlines and lower laterals). This project would reduce the predicted surcharge in the Evergreen Avenue trunk sewer to about 2 feet below the ground under design event peak wet weather flow conditions.

5.3.4 Alto Projects

The following project is proposed for the Alto system:

- Reduce I/I by approximately 10 percent in the Alto subbasins tributary to the Ashford Avenue trunk sewer by rehabilitating or replacing approximately 20 percent (~2,600 feet) of the sewers and associated lower laterals in Subbasins ALT200 and ALT300 (this assumes that a 50 percent reduction in I/I can be achieved through rehabilitation of mainlines and lower laterals). This project would further alleviate the surcharging in the Ashford/East Blithedale trunk sewer by lowering the model-predicted HGL to about 2 feet below ground, as well as reduce the surcharge in the relatively shallow SASM trunk sewer in Lomita Drive downstream of Sutton Manor Pump Station.

5.3.5 Smoke Testing

All agencies will conduct smoke testing in subbasins with wet weather peaking factors greater than 20 to identify and eliminate direct inflow connections, including storm drain cross-connections; open or defective cleanouts; manholes subject to surface inflow through covers or defective frames; and roof leaders and area drains that are directly connected to the sanitary sewer system.

5.3.6 Flow Monitoring

Projects that involve I/I reduction goals would include follow-up flow monitoring to verify that the anticipated I/I reductions have been achieved. If the results indicate that the I/I reduction goals have not been met, then more extensive rehabilitation would be undertaken or other improvements (e.g., construction of relief sewers) may be needed to provide the required capacity assurance measures.

5.4 Proposed Long-Term Capacity Assurance Plan

The SASM agencies' long-term capacity assurance plan involves further I/I reduction in the system to further reduce surcharge under peak wet weather flow conditions and reduce flows to the WWTP. I/I reduction would be achieved through targeted sewer rehabilitation in subbasins identified as having high wet weather flow contributions, and would be coordinated with infrastructure renewal needs identified

through sewer system inspection and condition assessment findings (see Section 6, Sewer Repair, Rehabilitation, and Replacement Plan). The SASM agencies plan to achieve these I/I reduction goals through a combination of targeted mainline and manhole repairs, rehabilitation, and replacement; some lower lateral rehabilitation and replacement in conjunction with mainline work; and potential rehabilitation incentives and additional regulations for private laterals. Progress in achieving flow reductions in the system would be evaluated through annual review of WWTP influent flow records and periodic (approximately every five years) temporary flow monitoring programs conducted in the collection system in areas where rehabilitation work has been conducted.

5.5 Capital Improvement Program

The estimated costs and proposed schedule for the short-term capacity assurance plan projects described above are presented in **Table 5-1**. Long-term I/I reduction projects are included in the Sewer Repair, Rehabilitation, and Replacement Plan presented in Section 6.

Table 5-1: Short-term (5-Year) Capacity Assurance Plan

Project	Responsible Agency	Est. Capital Cost[1]	Schedule
Overflow diversion from Almonte trunk to Rosemont Pump Station	SASM	$53,000	FY2012
Lower weirs at existing Almonte trunk overflow diversions	SASM	$33,000	FY2013
Sutton Manor PS pump upgrade	SASM	TBD	FY2015
Overflow diversion to 8-inch sewer in Miller Avenue at Millwood St.	Mill Valley	$37,000	FY2012
I/I reduction in Evergreen Ave. trunk sewer tributary area	HVSD	$1,320,000	FY2012-2015
I/I reduction in East Blithedale Ave./Ashford Ave. trunk sewer tributary area	Alto	$475,000	FY2012-2015
Smoke testing in high I/I subbasins[3]	Almonte	$9,000	FY2012-2015
	Alto	$7,000	FY2012-2015
	HVSD	$22,000	FY2012-2015
	Mill Valley	$26,000	FY2012-2015
	RBSD	$21,000	FY2012-2015

1. Costs are presented in 2010 dollars and include allowances for construction contingencies, technical services, and administration.
2. Estimated cost to be determined based on a planned predesign study to determine most viable approach for upgrading the pump station (see discussion in Section 2).
3. Subbasins with wet weather peaking factors greater than 20. Cost based on $0.50/ft. for smoke testing.

APPENDIX E

Infrastructure Renewal Program

Annual Report for Infrastructure Renewal Program

Homestead Valley measures the progress of its infrastructure renewal program by the number of feet of pipe replaced and/or repaired and rehabilitated during the past budgeting cycle.

Sewer Repair, Rehabilitation and Replacement Activities Completed in Previous Annual Cycle.

PRIOR CIP ACTIVITIES:

HVSD CIP - PRIOR YEARS	Bid	Bid	Final		Notice of	Final
JOBDESCRP	Opening	Amount	Amount	Engineering	Completion	Footage
Sewer Extension, Glen Grae	4/17/1989	$22,266				
Homestead Blvd Sewer Extension	6/14/1990	$27,550				
Tamalpais Drive Montford to Laurel (CR) see #6316	4/22/1997	$58,210			7/30/1997	
Sewer Rehabilitation Project Tamalpais Montford	7/15/2002	$107,701			9/24/2002	
Cleaning and Televising of Sewer System	1/23/2003	$46,020			12/9/2003	
Sewer Rehabilitation Project 2004	3/18/2004	$138,000			8/5/2004	
2005 Sewer Rehab -	4/12/2005	$246,240			8/26/2005	
Sewer Rehabilitation Project - Evergreen Ave	1/18/2007	$275,003			6/1/2007	
2008 Sewer Rehabilitation Project - Evergreen	2/14/2008	$126,943			6/17/2008	
2009 Televising Project - CR (see 7813)	10/8/2009	$27,288				

RECENT CIP ACTIVITIES:

HVSD CIP 2009 - 2013						
2009 Collaborative Project	10/15/2009	$95,053	$98,368	$18,643	8/24/2010	589
2010-2011 Pipebursting Project	3/22/2010	$364,968	$471,041	$70,783	10/4/2010	4,288
2011 Pipebursting Project	2/22/2011	$122,894	$214,530	$73,779	10/26/2011	1,830
2013-2104 CIP LaVerne & Reed-	5/22/2013	$144,987	$222,356	$40,897	12/20/2013	941
			Construction	**Engineering**	**Total Cost**	**Total ft.**
			$1,006,295	$204,102	$1,210,397	7,648

The CIP project for FY 2014/2015:

HVSD CIP 2014 - 2015		Cost	Feet	Line Segments replaced – manhole to manhole.
Pipeburst 10 inch	10/01/2014	$14,400	40	500.09-500.11
New 8" HDPE Liner	10/01/2014	$44,750	358	500.15-500.16-500.17
Upsize 6" to 8" via Pipeburst	10/01/2014	$49,925	475	500.17-500.19-500.21-500.25
Pipeburst 6"	10/01/2014	$151,330	1,531	513.05-513.07-513.09-513.11-513.15-513.17-513.22-513.18-513.19; 531.09-531.20-531.21-531.24; 531.05-531.07-531.09; 531.05-531.09-531.24
		Total Cost	**Total ft.**	
		$260,405	2,404	

The CIP project for FY 2015/2016:

HVSD CIP FY 2015 - 2016	Complete Date	Cost	Feet	Line Segments replaced – manhole to manhole.
Pipeburst 6”	4/15/16	$524,329	4,762	Please see attached for details
		Total Cost	**Total ft.**	
		$524,329	4,762	

The CIP project for FY 2016/2017:

HVSD CIP 10/16/16 – 10/15/17	Complete Date	Cost	Feet	Line Segments replaced – manhole to manhole.
Pipeburst 6”	9/15/16	$147,921	995	500.17- 522.01, 522.01- 522.03, 400.17- 400.13, 400.13 – 400.11
		Total Cost	**Total ft.**	
		$147,921	995	

PAST YEAR CIP ACTIVITIES:

HVSD CIP FY 2018 - 2019	Complete Date: Ongoing	Cost	Feet	Line Segments replaced – manhole to manhole.
Pipeburst 6” and 8”	As of 10/15/18	$751,390	4,609	Please see attached for details
		Total Cost	**Total ft.**	The HVSD Board approved up to $1.25M for the current CIP program. Current work completed is detailed here. Additional work scheduled FY18/19
		$751,390	4,609	

Homestead Valley is committed to continuing the progress it has made in replacing old pipe at a pace of approximately 2% or $250,000 per year. The current FY 18/19 CIP project received bids on 10/12/17. The winning bid was $662,077 with additional additive alternative work of $154, 862. The district awarded this contract at the October 2017 board meeting. Due to unanticipated delays (PG&E and MMWD had prior permit authorization in the same location) the project began in the middle of June 2018. The Board recently increased the authorization to $1.25 Millon.

Because of the cost and scope of this project (over 5,000 feet and approximately 8% of the districts sewers), the district considers this project to encompass CIP commitments through FY 22/23. After completion, about 53% of the District’s original VCP pipe will have been replaced.

	HOMESTEAD VALLEY SANITARY DISTRICT - 10 YEAR CIP	
YEAR	BUDGET	LOCATION
2017-2018	$0.0	Project delayed
2018-2019	$1,250,000	See attached
2019-2020	$0.0	To be determined
2021-2022	$0.0	To be determined
2022-2023	$0.0	To be determined
2023-2024	$250,000	To be determined
2024-2025	$250,000	To be determined
2025-2026	$250,000	To be determined
2026-2027	$250,000	To be determined
2027-2028	$250,000	To be determined
2028-2029	$250,000	To be determined

APPENDIX F

Audit Form

Homestead Valley Sanitary District
Annual Sewer System Management Plan Audit Form
2018/2019

On April 10, 2008, the Environmental Protection Agency (EPA) issued Order For Compliance, Docket No. CWA-309(a)-08-030 and superseded by an amended order for compliance issued September 2, 2008, requiring Homestead Valley Sanitary District (Almonte), as well as the five other members of the Sewerage Agency of Southern Marin, to adopt and implement a Sewer Spill Reduction Action Plan (SSRAP). The elements and requirements for compliance with this SSRAP are, in many aspects, duplicative of the SSMP requirements and in some aspects broader and more stringent. Homestead Valley and the other named agencies hired RMC Water and Environment to assist in response to and compliance with the requirements of this order. The California Regional Water Quality Control Board has received copies of all submittals in complying with the above referenced order.

The purpose of this Sewer System Management Plan (SSMP) Audit is to evaluate the effectiveness of Homestead Valley Sanitary District's SSMP and to identify deficiencies, if any, and steps to correct them. The audit is submitted pursuant to the requirements included in the State Water Resources Control Board Order No. 2006-0003-DWQ and San Francisco Bay Regional Water Quality Control Board's Sewer System Management Plan Development Guide, July 2005. Information collected in the Annual Report of Sanitary Sewer Overflows is used in preparing this audit and therefore the two reports are intended to be submitted simultaneously.

Directions: *Please update the following attachments to* Homestead Valley Sanitary District's *SSMP before completing the questions below. Check the corresponding box upon completion.*

Homestead Valley Sanitary District's Phone List
List of SSO Responders' After-Hours Alternate Phone Numbers

Directions: *Please circle **YES** or **NO** for each question. To answer the following questions refer to the text of the SSMP Element, any referenced material in the text, all corresponding Attachments, and any data collected to assist in assessing SSMP effectiveness. For any **NO** responses describe the updates or changes needed and the timeline to completion in "Description of Scheduled Updates/Changes to the SSMP" on Page 5 of this form.*

ELEMENT I. GOALS

1. Are the goals stated in the SSMP still appropriate and accurate? **YES / NO**

ELEMENT II. ORGANIZATION

2. Is the SSMP up-to-date with the organization and staffing contact information? **YES / NO**

ELEMENT III. OVERFLOW EMERGENCY RESPONSE PLAN

3. Does the SSMP contain or reference an up-to-date version of the Overflow Emergency Response Plan? **YES / NO**
4. Considering the information in the Annual SSO Report, is the Overflow Emergency Response Plan effective in handling SSOs? **YES / NO**

ELEMENT IV. FATS, OILS, AND GREASE (FOG) CONTROL PLAN

5. Does the SSMP contain or reference up-to-date information about the FOG control program? **YES / NO**
6. Based upon information in the SSO Annual Report, is the current FOG program effective in documenting and controlling FOG sources? **YES / NO**

ELEMENT V. LEGAL AUTHORITY

7. Does the SSMP contain or reference up-to-date information about the legal authority? **YES / NO**
8. Does the agency have sufficient legal authority to control sewer use and maintenance? **YES / NO**

ELEMENT VI. MEASURES AND ACTIVITIES

a. COLLECTION SYSTEM MAPS

9. Does the SSMP contain or reference up-to-date information about relevant maps? **YES / NO**
10. Are the collection system maps complete, up-to-date, and sufficiently detailed? **YES / NO**

b. RESOURCES AND BUDGET

11. Does the SSMP contain or reference up-to-date information about resources and budget? **YES / NO**
12. Are resources and budget sufficient to support effective sewer system management? **YES / NO**
13. Do planning efforts support long-term goals? **YES / NO**

c. PRIORITIZED PREVENTIVE MAINTENANCE

14. Does the SSMP contain or reference up-to-date information about preventive maintenance activities? **YES / NO**
15. Based upon information in the Annual SSO Report, are preventive maintenance activities sufficient and effective in reducing and **YES / NO**

preventing SSOs and blockages?

d. SCHEDULED INSPECTIONS AND CONDITION ASSESSMENT

16. Does the SSMP contain or reference up-to-date information about inspections and condition assessment? **YES / NO**

17. Are scheduled inspections and the condition assessment system effective in locating, identifying, and addressing deficiencies? **YES / NO**

e. CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES

18. Does the SSMP contain or reference up-to-date information about equipment and replacement inventories? **YES / NO**

19. Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance? **YES / NO**

f. TRAINING

20. Does the SSMP contain or reference up-to-date information about training expectations and programs? **YES / NO**

21. Do supervisors believe that their staff are sufficiently trained? **YES / NO**

22. Are staff satisfied with the training opportunities and support offered to them? **YES / NO**

g. OUTREACH TO PLUMBERS AND BUILDING CONTRACTORS

23. Does the SSMP contain or reference up-to-date information about outreach to plumbers and building contractors? **YES / NO**

24. Has the agency conducted or participated in any outreach activities to plumbers and building contractors? **YES / NO**

ELEMENT VII. DESIGN AND CONSTRUCTION STANDARDS

25. Does the SSMP contain or reference up-to-date information about design and construction standards? **YES / NO**

26. Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date? **YES / NO**

ELEMENT VIII. CAPACITY MANAGEMENT

27. Does the SSMP contain or reference up-to-date information about capacity assessment? **YES / NO**

28. Has the agency completed a capacity assessment and identified and **YES / NO**

addressed any hydraulic deficiencies in the system?

ELEMENT IX. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

29. Does the SSMP contain or reference up-to-date information about data collection and organization? **YES / NO**

30. Are data collection and organization sufficient to evaluate the effectiveness of the SSMP? **YES / NO**

ELEMENT X. SSMP AUDITS

31. Will this SSMP Audit be submitted with the Annual Report to the Regional Water Board by March 15? **YES / NO**

ELEMENT XI. COMMUNICATION PROGRAM

32. Has the agency effectively communicated with the public and other agencies about the development, implementation and performance of the SSMP? **YES / NO**

33. Has the agency provided the public the opportunity for input as the program is developed and implemented? **YES / NO**

Description of Scheduled Updates/Changes to the SSMP

*Directions: For each question answered **NO**, please reference the SSMP Element and the audit question number when describing the content of any updates/changes needed and the timeline to completion.*

APPENDIX G

Emergency Contacts

Homestead Valley SD Contacts

HOMESTEAD VALLEY SANITARY DISTRICT

P.O.BOX 149, MILL VALLEY, CA 94942; PHONE & FAX: (415)388-4796

ROSTER OF BOARD MEMBERS, April, 2019

DIRECTORS	ADDRESS	PHONE	TERM EXPIRES
Allan Leibof, President Al.leibof@gmail.com	209 Reed Street	388-3482	12/22
Rick Montalvan, Secretary montalvanent@comcast.net	209 Hawthorne Avenue	415.407.3491	12/20
Al Wuthnow alwuthnow@gmail.com	214 Melrose Avenue	Cell: 415.640.6747	12/20
Chuck Oldenburg chuckoldenburg@gmail.com	568 Montford Avenue	388-9315	12/20
Alan Saltzman alanhsaltzman@gmail.com	205 Melrose Avenue	888-3433	12/20
Bonner Beuhler, Manager manager@homesteadvalleysd.org	129 Stadium Ave,	388-4964 (office), 725-7852, 710-1129 (cell phones)	

ABOVE ADDRESS ARE MILL VALLEY, CA 94941 (415) area code

FREQUENTLY CALLED FIRMS AND AGENCIES

AGENCY	CONTACT	PHONE	ADDRESS
Alto Sanitary District	Bill Hansell, Manager	**388-3696**	P.O. Box 163, Mill Valley, CA 94942
Almonte San. Dist	Shonn Dougherty, Manager	**388-8775**	P.O. Box 698, Mill Valley, CA 94942
Richardson Bay San. Dist.	Johnny Tucker, Manager	**388-1345**	500 Tiburon Blvd, Tiburon CA 94920
Tamalpais C.S.D.	Heather Abrams, Manager	**388-6393**	305 Bell Lane, Mill Valley CA 94941
LAFCo	Jason Fried, Ex. Officer	**446-4409**	555Northgate Dr, San Rafael CA 94903
	Fax:	**446-4410**	
Mill Valley Refuse	David Biggio, President James Iavarone, Partner	**457-9760**	P.O. Box 3557 San Rafael, CA 94912-3557
Nute Engineering	Pippin Cavagnaro	**453-4480**	901 Mission Ave, San Rafael CA 94901
Roto Rooter	Office: Don, Mindy Calegari Clyde Klyse, Service Mgr Cell: Adam Gallagher, Field Mgr Cell:	**388-2740** **720-0300** **559-1066**	885 Olive Ave, Novato, CA 94945
SASM	Mark Grusayev Gen. Mgr.	**388-2402**	450 Sycamore Ave, Mill Valley Mail: 26 Corte Madera Ave, M.V. 94941
MARIN COUNTY			
Auditor-Controller	Edmond Dea (Accounts)	**499-6163**	Room 225, Marin Civic Center San Rafael, CA 94903
Bldg. Inspection	Kathy, Bridgette, Marina	**499-6550**	Room 308, Marin Civic Center San Rafael, CA 94903
County Counsel	John F. (Jack) Govi Deputy County Counsel	**499-6117**	Ste. 275, Marin Civic Center San Rafael, CA 94903
Registrar of Voters	Dan Miller Filing Officer	**499-6437**	Room 121, Marin Civic Center P.O. Box E, San Rafael San Rafael, CA 94913-3904

ROTO-ROOTER PLUMBERS
License # 288461

Tel 415.898.2700 Fax 415. 898.6074 www.rotorooter.com
P.O. Box 3415 San Rafael, California 94912

MANAGER PHONE NUMBERS

Employee Name	Email	Cell Number
Mendy Calegari	mendy@marin-rotorooter.com	415-559-3501
Adam Gallagher	adam@marin-rotorooter.com	415-559-1066
Stan Stanfield	stan@marin-rotorooter.com	415-328-9749

OFFICE EMPLOYEES

Jen Giuntini	Jen@marin-rotorooter.com
Jessica Escarcega	Jessica@marin-rotorooter.com

SERVICE TECHNICIAN PHONE NUMBERS

Employee Name	Cell Number
Rob Murphy	415-720-0611
John Selhorst	415-559-2231
Fernando Lara	415-559-2230
Jelani Pavageau	415-559-4468
Donte' Armstrong	415-720-1782

Chapter 5 Regulatory Reporting

This chapter describes the requirements that have been established for reporting of SSOs to the regulatory agencies.

5.1 Multiple Appearance Points – Single SSO

For reporting purposes, if one SSO event of whatever category results in multiple appearance points in a sewer system, a single SSO report is required in CIWQS which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and descriptions of the locations of all other discharge points associated with the single SSO event.

5.2 2-Hour Notification to Regulatory Agencies of SSOs

Cal OES is to be notified of a Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water. In addition, both the County Health Officer and EHS are to be contacted. During regular business hours, the Health Officer can be reached at (415) 473-3707 and the main EHS phone number to call is (415) 473-6907. During evenings/weekends, call the Sheriff Communication Center at (415) 479-2311.

The First Responder is responsible for reviewing field data for reporting to regulatory agencies. If it is determined that the criteria for OES notification was met, than the First Responder must notify OES of the event no later than two (2) hours after:

1. The District has knowledge of the SSO;
2. Notification is possible; and
3. Notification can be provided without substantially impeding cleanup or other emergency measures.

The OES phone number is (800) 852-7550.

The First Responder is responsible for obtaining an OES Control number. Following the initial notification to OES and until the SSO report is certified in the SWRCB online SSO Database, the LRO will provide updates (or provide direction for updates to be provided) to OES regarding substantial changes to estimated volume of untreated or partially treated sewage discharged and any substantial changes to known impact(s).

5.3 Detailed Reporting Requirements

Table 5-1 provides detail on the District's regulatory reporting requirements, which are also described in the paragraphs following Table 5-1.

If SSO	Then Notify
Category 1 – SSO of any volume that reaches surface water and/or a drainage channel tributary to surface water, or reaches a municipal separate storm sewer system and not fully captured.	**2-Hour Notification to** CalOES: (800) 852-7550. Ask for an OES Control Number (for RWQCB). County Health Officer (415) 473-3707 and Marin County Environmental Health Services (EHS) (415) 473-6907 are also to be contacted. During evenings/weekends, call the Sheriff Communication Center at (415) 473-7250. **Within 3 Business Days** of Notification report to SWRCB using CIWQS **Within 15 Calendar Days** of Conclusion of Response certify by LRO using CIWQS **Within 45 Calendar Days of Conclusion of Response** submit SSO Technical Report via CIWQS online database **Additional Notification as Needed** – California DFWS: (707)-944-5500
Category 2 SSO: SSO of 1,000 gallons or greater that does not reach surface water, a drainage channel, or a municipal separate storm sewer system, or is otherwise fully recovered and disposed of properly.	**Within 3 Business Days** of Notification report to SWRCB using CIWQS **Within 15 Calendar Days** of Conclusion of Response certify by LRO using CIWQS
Category 3 – All other SSOs	**Within 30 Calendar Days** past End of Month with SSO Event report to SWRCB and certify by LRO using CIWQS
Negative Reporting (no SSOs in month)	**Within 30 Calendar Days** past End of Month report by LRO to SWRCB using CIWQS
Member Agency SSO (respond and then contact member agency)	• SASM: (415) 388-2402 • City of Mill Valley: (415) 388-4033 • Homestead Valley Sanitary District: (415) 388-4796 • Alto Sanitary District: (415) 388-3696 • Almonte Sanitary District: (415) 388-8775 • Tamalpais Community Services District: (415) 389-8722
Collection System Questionnaire	Update and certify every 12 months
In the event that CIWQS is not available, the LRO or their designee will fax all required information to the RWQCB office in accordance with the time schedules identified above. In such event, the District will submit the appropriate reports using CIWQS as soon as practical. The San Francisco Bay RWQCB (Region 2) Fax number is (510) 622-2460.	

SSO Reporting for Category 1 SSOs

1,000 gallons, as stated earlier in this Section.

- The Data Submitter must then submit the initial draft report to the SWRCB's CIWQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs within 3 business days of becoming aware of the SSO.
- Within 15 calendar days of the SSO end date, the LRO must review and certify the report in the CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs

SSO Reporting for Category 2 SSOs

- Within 3 business days of becoming aware if the SSO, the District Manager must submit the initial report to the SWRCB's CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs.
- Within 15 calendar days of the SSO end date, the LRO must review and certify the report in the CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs.

SSO Reporting for Category 3 SSOs

- Within 30 calendar days of the end of the calendar month in which the SSO occurred, the LRO must submit and certify a report to the SWRCB's CWIQS Online SSO database @ http://ciwqs.waterboards.ca.gov/ciwqs.

No Spill Certification (Monthly)

- Within 30 calendar days of the end of a calendar month that there are no SSO's, the LRO must submit and certify a "No Spill" certification to the CIWQS online SSO database.

CIWQS Not Available

In the event that the CIWQS online SSO database is not available, the LRO will fax or e-mail all required information to the RWQCB office at (510) 622-2460 in accordance with the time schedules identified above. In such an event, the District will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO document file.

Amending SSO Reports

The LRO is responsible for amending SSO reports. Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the District must contact the State SSO Program Manager to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days. The SWRCB SSO Program Manager contact information is as follows:

Russell Norman, P.E.
State Water Resources Control Board
Division of Water Quality
1001 I Street 15th Floor
Sacramento, CA 95814
E-mail: Russell.norman@waterboards.ca.gov
Phone: (916) 323-5598